

# ELECTRICAL CONTRACTOR ~ DEALER

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## **Ready for Christmas**

Now is the time that every electrical contractor-dealer should arrange the store for Christmas business. Not only should the show windows be trimmed for this occasion, but the interior should also be fittingly dressed.

It is to be presumed that before the first of this month there has already been done some preliminary Christmas advertising by the progressive contractor-dealer. In addition to newspaper space, the regular trade should be circularized, and outdoor display and car cards should also be employed where it is possible to do so.

It should be remembered that the public is not yet sufficiently familiar with electrical goods to make purchases off-hand without being reminded. And even so, such trades as books, jewelry, notions, and in fact practically all lines make strong appeals to Christmas buyers at this time of the year.

Let the contractor-dealer trim for Christmas. Rearrange the interior of the store. Place to the fore those articles that particularly can be featured as gift goods. Put the more bulky and less attractive stock into the background for the time being. Let the new arrangement remain until after the holidays. Decorate the walls and the entire interior in holiday attire. It should bespeak the spirit of Christmas in tones that would not be misunderstood.

Window displays from now until Christmas should carry out the same idea. Give them the true Christmas feeling—green and gold, with touches of red, and electric lights galore. Every contractor-dealer has facilities at hand for making unique displays that will excel those of any of the neighborhood stores.

Let the public know that electrical goods make appropriate Christmas gifts. Not only are such articles attractive, but they are useful and durable. In addition to the regular line of appliances, the contractor-dealer should also stock a practical line of electrical toys. Teach the children the uses of electricity. Familiarize the young folks with electrical products and the way is paved for future business.

Make a real Christmas store of the electric shop for the time being. The other part of the business will not need to be neglected. One fits into the other. But during this next month specialize on the Christmas business. It is sure to be profitable if it is gone into with heart and soul.

## **Electrical Inventions**

The present period of time has been called the age of inventions. This term might well be amended to include the word electrical, for to those in the industry it would seem that the inventive talent of all the world is now engaged in creating devices that require electricity for their operation.

Within the memory of most of us, when the elusive juice first came into commercial use, great satisfaction was experienced in being able to direct its energy to the ringing of bells and to its employment for furnishing artificial light. Other applications of this strange force were then made with more or less success, although its practical application for universal use was prophesied only by those who had great imaginative powers.

This was the period of discovery in the electrical field. An unknown force had been revealed to man, and now it must be put to work. At that point the inventive genius became interested. Indeed here was something to conjure with—an element worthy of his acquaintance. It could be made to work at all times and in all conditions. Its supply was inexhaustible—it must be put to work. And so the inventor began to contrive ways and means of harnessing this latent energy for practical use.

It is only today that the universal employment of electricity is known to be an assured fact of the future. Those who are close to it recognize in it a means of solving the world's problems relating to light, heat, and power. It is increasing industrial productivity; it is largely responsible for a greater agricultural output; it is helping to eliminate time and space; it is rapidly becoming the preserving element of all other elements.

In this age of electrical inventions it is becoming difficult even for those who are in the industry to keep up with the creations of the inventor. He is working fast. Devices, appliances, and appurtenances are piling up on us so rapidly that we scarcely have time to learn the uses of one until it is replaced by another.

While it would seem to be the height of folly to discourage the efforts of the busy inventor, yet it truthfully can be said that such a condition is confusing. In the household appliance field alone the public is puzzled because of the multiplicity of electrical necessities—all of which eventually must come into general use, although at present

which style or kind to adopt is confusing on account of the wide variety from which to choose.

Possibly such a situation may help to do away with the bugbear of competition which so sorely oppresses some contractor-dealers; for even though there may be a dozen electrical stores in one neighborhood, enough different appliances are now on the market to outfit each store without duplication. There then should be the tendency to talk service and the merits of products rather than the cutting of prices on the same articles.

At any rate, the continued introduction of new electrical inventions is bound to help contractor-dealers to become better merchandisers; for it must cause them to exercise their judgment—to become more expert in buying—and thus they learn to be better sellers.

### **Scarcity of Help**

It is not that there are not enough people in the world to do the world's work, but too many of the workers are wanting somebody else to do the work for them.

In reality there is not any scarcity of help, but there is a scarcity of ambition to work. It is a lack of spirit—a sort of constitutional laziness following the general feeling of unrest which resulted from the world war.

Due to this universal unrest the period of adjustment has been long drawn out. Everything was out of kilter after the war. Business was turned upside down and society was torn to shreds. Orderly arrangement was out of the question when the war ended, for there had been no time for anything but war.

After the signing of the armistice we wanted to straighten out everything within a day or two. That could not be done—there had been too much disruption and destruction. The damage could not be repaired in a day. So then we became fretful; we were impatient; and this soon led into a world wide restlessness that will more than likely continue for years.

What is to be done? Be patient and attend to our own affairs as best we can, is about all. Readjustment of business is being accomplished; there is a process of reconstruction under way; social affairs are being straightened out; and the recent election settles the question of politics for some time to come; so now let's go, as they used to say in the war days.

It may be that in the work of reconstruction and readjustment there will be required a considerable amount of reeducation. It may be necessary to teach our help that for every dollar we pay them we are entitled to a full dollar's worth of work. We must again teach them the meaning of the figures on the clock dial; that coming to work even a few minutes late in the morning and quitting earlier than the time agreed upon is not only unfair, but positively unjust; that a work shirker is dishonest; that failing to perform a full day's duty is the boldest kind of disloyalty; that stealing time is the same as stealing money.

Such a schedule of teaching should be world wide—we all need it. We should be retaught to do our duty. Simple things that we learned in our youth seem to have been forgotten during the past few years. Reeducation is required. After that has been accomplished, let us see if there is really a scarcity of help.

### **The Marketing Problem**

While the electrical industry is now experiencing its troubles in the question of how to market its products efficiently, it may be apropos to point to the fact that all other industries which supply the public have had—and some still have—their troubles in straightening out the tangles that exist between the periods of production and consumption.

It is one thing to manufacture goods, and another thing to move them. The distance between the producer and the public is usually too great to justify the enormous expense required to go direct without stops. There must be relay stations of one kind or another. Some manufacturers believe that there is an advantage in maintaining their own warehouses from which they reach jobbers or retailers, according to their policy. Others go direct to the public through their own stores or by sales agents that make a direct canvass of the public.

Any of these methods may be profitable to those employing them, but there is scarcely room for doubt that the industry of which they are a part does not share in the benefits of such profits. The natural course of marketing is from producer to wholesale distributor, thence through the retailer to the public. This is the most practical plan of distribution, and when this line is broken the industry must suffer to a certain extent.

Each of the factors of the usual method of marketing has his own functions to perform. When each one attends exclusively to his particular duty there is a harmonious working together that assures satisfaction all along the line, from producer to consumer. But when a manufacturer attempts to retail and wholesale; a jobber manufactures and distributes; and a retailer endeavors to do a little of everything, the public as well as the industry must lose in one way or another.

To be sure there appears to be an enormous waste in the adopted methods of marketing—a waste of energy, expense, and time. In most cases this is the fault of transportation facilities—the lack of means of speedy delivery at all times. The farmer experiences this trouble—the producer of raw materials, and on through to the retail distributor. There seems to be no remedy for it at present.

In the electrical industry, after all has been said and done, it will doubtless be seen that the logical way to market is to follow precedents—manufacturer to supply jobber, then on to the retail distributor—the contractor-dealer—and thence to the consumer. At present this would seem to be the line of least resistance—the plan approved by most of the great industries today.

A better plan may be worked out by pioneering experimenters, but until proof of improvement is in evidence, let each of the present factors continue to coöperate, for their own good and for the betterment of the entire industry.

### **Working for the Future**

Those who have followed the progress of the National Association of Electrical Contractors and Dealers during the past few years can have but the greatest admiration and highest praise for the present status of that organization. Since the trying times brought about by the world war it

has practically doubled its membership; its financial statement shows a comfortable balance on the right side; and its working committees have brought forth a wealth of useful material that must be of everlasting benefit to all concerned.

Not only have these things been actually accomplished, but as a result of their accomplishment, still greater things have been brought to light; so that now the membership of this organization can have the assurance that the principles of scientific business methods are within their grasp—are theirs for immediate adoption and for continuous operation.

Who is responsible for this flourishing state of affairs? Not those who have gone into the organization expecting to get something out of it without lending any assistance. Not those who think that when they pay dues their obligations are over. Not those who put nothing into it but their membership and expect to get everything out of it.

Credit for the attainments of the National Association can properly go only to those who work for its success. Who are they? Plain business men, every one of them—contractors, dealers, contractor-dealers—just men of everyday business affairs. Carping critics have been heard to say that these men neglected their business to do association work. It would look that way to the man who lives within himself; but to the broad minded, whole souled modern business man, it is reasoned out that he can well afford to neglect his business temporarily in order to take a hand in erecting a structure that not only will protect every other man in his line of business, but will forever be a protection to himself and to his followers.

While it must be admitted that none of them have been interviewed in this connection, nevertheless this must be the underlying motive of every officer and member of the National Executive Committee. They cannot be working for love of self when it is known that every contractor-dealer in the land must benefit by their accomplishments. They cannot be doing association business for love of work, for each one has his own business to which every one of his working hours could be devoted.

Then these workers to whom all credit is due for the success of the National Association must be working for the good of all—not as philanthropists, not for fame and glory, but for the betterment of electrical contractor-dealer interests, the business to which they themselves belong. They are building for the future—for that day in the industry which they themselves may never live to see, but for which the coming generations of contractor-dealers will call them blessed.

Then it is the duty of each and every member of the National Association to aid these loyal workers in every possible manner. They require assistance more than thanks—although appreciation must help some. They deserve the support of all members. See that they get it.

### **Buffalo Next July**

Although to many of our readers it may seem rather early to say anything about the next annual convention of the National Association of Electrical Contractors and Dealers, to those who have such matters in charge it already has become a part of their regular duties. In fact before the train dust had been fairly brushed off upon their re-

turn from the Baltimore convention, a committee was busily engaged in making preliminary plans for the next annual gathering. This indeed is an admirable example of forehandedness.

As stated in last month's issue, Buffalo, New York, was decided upon as the place to hold the next annual meeting, and Wednesday, July 20, the day and date of the opening session. This date falls closest to that of twenty years ago when the first annual convention of the organization was called to order in that same city.

A comparative few of those now engaged in the electrical contractor-dealer business realize the great changes that have taken place in their branch of the industry within this twenty year period. It is the desire of the 1921 convention committee that these facts may be brought out and made clear to members of the National Association. Admitting that in some cases comparisons may be odious, it is believed that nothing but encouragement will come from comparing the year 1921 with that of 1901 in the electrical business.

Those in charge of the preliminary arrangements for next year's annual convention are endeavoring to locate the handful of men that attended the first Buffalo meeting, with the object of inducing them to take part in the coming affair, and also for the purpose of gaining all possible information concerning the first event, which can be accurately accomplished only by personally comparing notes.

Already the Buffalo Chamber of Commerce has extended a welcome to the National Association and offers assurances of hospitality and entertainment. It is not too early for members to begin making plans for attending this annual gathering which bids fair to excel anything of the kind ever held by the contractor-dealer interests.

### **Revised Code Issued**

The National Electrical Code is usually revised every two years and the issue of 1920 is just off the press. It comprises the regulations of the National Board of Fire Underwriters for electric wiring and apparatus as recommended by the National Fire Protection Association. It is stated that the next revision probably will be made in 1922.

In the new edition there are noted one hundred and ninety-two changes, including the slight alterations in captions and the occasional rewording of paragraphs. In order to more readily familiarize users of the book with the revisions, a list of them has been compiled and is printed on other pages of this month's issue.

The National Electrical Code was originally drawn in the year 1897 as the result of united efforts of the various insurance, electrical, architectural, and allied interests.

It has been amended and revised from time to time, the National Fire Protection Association being aided in this work by seven national organizations represented on its electrical committee.

The National Association of Electrical Contractors and Dealers has sent to its entire membership copies of this latest revision of the National Electrical Code, and users should at once mark the rules and sections in which alterations have been made, so as to become familiar with recent changes.



## Learn the Language of America



The Inter-racial Council  
233 Broadway, N.Y.

C.V. Burger.

### TO THE FOREIGN BORN:

*You have brought to America your racial talents, your industry, your strength, and your love of liberty—but*

*Your hands are tied by ignorance of the English language.*

*Get rid of these fetters, and then you can help make America great and strong and beautiful. Learn the English language.*



# Keep in Intimate Touch With the Business

By J. E. BULLARD.

How to Get Acquainted With Your Own Affairs  
in a Way That Will Work to Your Future Profits

Many a man and his business are strangers. Only in a more or less vague way does he know just what is going on in his business or what his real net profits amount to. This statement is borne out by the fact that millions of dollars have been paid to the government on incomes that were not earned but that the business men thought they had earned.

The more intimately a man knows his business the greater will be the profits that he will make. The less intimately he knows his business the less profit he will make and the greater the certainty that he will be closed out by the sheriff sooner or later. It is not only necessary to know how to run the business but to know the condition of the business at any and all times.

For several years there have been a surprisingly small number of business failures. It has been rather hard for a business man to fail during these years. One cause of failures in ordinary times is an overstock of goods. During the past few years an overstock of goods increased rather than reduced profits. Circumstances have put many a dollar into the bank account of men who in normal times would have lost so much money that they would have been forced out of business.

Business conditions, however, are changing. It is getting easier and easier to buy stock and there is every indication that before very long there will be a decline in prices. To the man who knows his stock thoroughly and who has kept his stock in good condition there is nothing much to worry about. He will exercise just a little more care and see to it that no decline in prices will find his stock in such shape that he will suffer any serious loss.

This means watching the stock closely. It means taking frequent inventories, it will probably mean keeping a perpetual record of the stock; that is, keeping a set of cards which show the balance on hand of each item of stock as well as a record of all stock purchased and all stock sold or used as well as a record of the prices at which the stock was purchased.

In times like these such stock records are worth far more than they are in ordinary times. They give information

that is needed by which to go forward. Without such complete stock records it is necessary to do more or else groping about in the dark and this is no time for such groping.

## Watch the Monthly Sales

There are some business men who appear to believe that their sales have increased to a greater extent than they actually have. In fact these men may have an idea that sales have increased when as a matter of fact they have actually fallen off.

We have become so accustomed to measure the volume of business in dollars and cents that when the dollar changes in value we are only too likely to be misled. Now in comparing monthly sales with sales of a year ago that which counts most is not the number of dollars but the number of washing machines, vacuum cleaners, sewing machine motors, fans, and other items in the store that have been sold and the actual number and size of the wiring contracts that have been handled. The dealer who does not possess this information has not an intimate knowledge of his monthly sales. At best he has only a vague knowledge.

Today we are told that the dollar is worth not more than a fifty cent piece was worth some years ago. When we go to buy some things we know that the dollar is not worth what fifty cents was worth seven years ago. Other things we find selling at the same prices at which they were selling a few years ago. For this reason it is not possible to secure accurate information in regard to sales by averaging the value of the dollar. It is necessary to compare the actual number of the different kinds of appliances sold if we are going to get any accurate idea of just how sales are varying.

## Percentage of Bad Bills

The uncollectable bill forms an item of overhead that must be figured on every job and must be added to the selling price of every article sold if the business is to show a reasonable profit. For this reason it is necessary to know with accuracy just what percentage of bills are uncollectable. It is well in making an estimate to be conservative. That is, count any bills that are at all

doubtful as uncollectable and use greater care in extending credit. Unless this is done it will be necessary to go out of business anyhow for it doesn't require a very large percentage of uncollectable bills in any business to drive it upon the rocks.

There is no profit in increasing the volume of business if this is done at the expense of great risk in getting paid for the goods sold or the work done. It is sounder business and far better for the bank account to do less business and get paid for all of it. In any case it is absolutely necessary to know exactly what percentage is lost so that it can be added to estimates and selling prices.

## Know What the Public Wants

One might go so far as to say that all business depressions are caused by blindness in regard to what the public wants. Prices keep on soaring until people cease to spend money. Goods of a certain kind and price are manufactured and sold when it is goods of another kind and price that people really want. Not until the public refuses to buy do the producers wake up to the real demands of the public and in the meantime there may come a business depression of more or less seriousness.

In the case of the dealer it usually means bankruptcy if he fails for too long a time to realize what people want to buy. If he keeps in close enough touch with the wants of the public, his business grows rapidly and he soon comes to be a merchant prince rather than a small dealer.

The success of many a big retail business is traceable directly to the ability of the man at the head of it to sense just what the people want. By buying and displaying what the people want it was easy to build up a big business. It amounted to little more than filling orders. The hard thing is to learn with exactness just what people do want.

## Take Frequent Inventories

In order to gain all this intimacy with the business it is necessary to take very frequent inventories. The more frequently the inventory is taken the longer the business is likely to live and the greater the profits it is sure to show.

Inventories not only mean checking up all the stock on hand but also mak-

ing a complete analysis of all the assets and liabilities of the business. Any doubtful or bad bill become a liability unless they are completely written off the books as far as the inventory is concerned. Under no circumstances should they be considered as an asset.

All stock and other property when considered in the inventory should be valued at its lowest price. If it was purchased when prices were lower than they are today, value it at the price paid for it. If it sells for less today than it did on the day it was purchased, value at the price at which it could be bought today. In taking an inventory it is always well to be pessimistic rather than optimistic. Value everything at prices too low rather than too high.

The more rapidly conditions are changing the more necessary it is to take inventories frequently and the more necessary it is that the greatest care be taken that no imaginary values creep into these inventories. It is real values and real values alone that count when taking an inventory.

What a diagnosis is to a physician an inventory is to the business. It is a way of finding out just what is wrong with the business if anything is wrong. It is a taking of the temperature and the counting of the pulse of the business. It is learning the true condition of the business. It is discovering any disease from which the business may be suffering and knowing what remedy should be prescribed.

An inventory is not complete until it takes into account the personelle of the business. It is necessary to consider if each man drawing a salary or wages from the business is really earning all that he is getting; if the man at the head of the business is managing the business in the best possible manner.

In fact it pays a man far better than he will ever realize until he tries it to analyze his own qualities, to stand back and look at himself and try to discover the mistakes that he is making, try to find the qualities that must be developed in order to make a greater success of the business. For this reason when an inventory of the business is taken it is well to make a quiet little inventory of yourself.

#### *Watch Buying Habits*

To keep the profits of the business up to the maximum it is necessary to divide the business into convenient departments and study each department. There are some things that sell more

readily than others. There are some things that it may cost more to sell than the total amount of gross profit allowed. There may be whole departments that are not actually paying their way.

The smaller the departments into which the business is divided and the more closely the profits in each department are watched the less the danger that any business will be done at a loss, that any articles will be sold at a loss.

In making a study of these different departments it is well to learn just what people are buying to the greatest extent, just how the buying demand is changing. This should be learned from the actual facts by a comparison of actual records made from invoices and inventories and not merely guesses.

The man who relies upon guesses is not a business man. He is a gambler. The business man gets the facts and plans his course accordingly. It is a little harder to get the facts than it is to guess, but it is a whole lot safer to work from facts.

One way in which the business might be divided into departments is as follows: Of course the contracting department is a department by itself. This department may well be run as almost a separate business. In some cases it may even be well to make it a separate concern altogether. It is not fair to the store to make it carry too many of the risks of contracting and it is not fair to the contracting department to call upon it to help support the store. Therefore it will be well to keep the two as distinct as possible. At least make each entirely self supporting and not dependent in any way upon the other.

In the store, there might be a large domestic appliance department including the higher priced domestic appliances; a small domestic appliances department including the lower priced appliances; a repair department; a supply department; a lamp department; a motor department and any other departments it may be desired to establish. On the other hand if the business is small it may be satisfactory to divide the business of the store into domestic appliances, business and industrial appliances, lamp department and repair department.

The main thing is to have a large enough number of departments to enable a close study of the business and make it certain that everything carried in stock is paying its way. It is also well to know those items that are re-

sulting in the greatest profit and those which are resulting in the least profit.

#### *Facts Help Credit*

Of course a man can go too far in the direction of keeping records. He can make records such a hobby that he hasn't any time left to build up the business. Usually, however, the tendency is the other way. Usually a man does not know enough facts to enable him to build up his profits to the maximum. In order to make plans that will result in the greatest possible volume of business and the greatest possible profits it is necessary to have as intimate knowledge of the business as can be used.

No information about the business that can and is used in a constructive way is information that it has not been worth while digging for. The value of information after all lies in the way that it is used. The information that Edison has acquired would have amounted to nothing if he had used it merely for the purpose of philosophizing and had not actually accomplished results.

One of the most direct ways in which the facts gained from an intimate knowledge of the business can be used is at the bank. When you go to the banker to borrow money with which to increase business you are in a way going there to borrow money for someone else. The business is to a certain extent an artificial personality. It is something that has been created and which may exist for many generations.

If you have complete knowledge of the business then it is a good deal like trying to borrow money for a friend who you know thoroughly and in whom you have the utmost confidence. If you don't know the business intimately, then it is a good deal like trying to persuade the banker to lend money to a person who is a stranger to you both.

Looking at the proposition in this way it is easy to see to whom the money would be lent. Therefore, if you want to build up the business at the most rapid rate be sure that you know it intimately enough so that you can get the banker as well as yourself to have confidence in it. Have the facts and figures about your business at your finger tips and there will never be much difficulty experienced in raising all the money needed to expand the business. Fail to have these facts and figures at hand and it may be hard to meet all obligations.

# Gazing Through Your Credit Mirror

BY DR. NORRIS A. BRISCO

Contractor-Dealers Should Cultivate the Friendship of Bankers and Credit Men Before Attempting to Deal With Them Extensively

[NOTE—This is the first of an interesting series of articles by Dr. Brisco, who is director of New York University School for Teachers of Retail Selling; formerly director of School of Commerce of Iowa State University; author of "Economics of Business," "Economics of Efficiency," "Fundamentals of Salesmanship," "Source Book in Retail Salesmanship." Dr. Brisco has made a special study of retailing and store methods, and his articles will be followed with profit by the retail branch of the electrical industry.—The Editor].

The other day I happened to be conversing with a banker friend of mine. He recalled some of his interesting experiences with retail merchants.

"You know," he said, "credit is like a mirror. You look into it and you see yourself as you really are, and not as your friends and enemies see you. There isn't the slightest exaggeration in the reflection of a credit mirror. It would do some merchants a lot of good to gaze into the credit mirror as often as they can, in order to keep from spoiling their looks.

"Take the case of Jones, a merchant down the street. He came to me for a loan, and I had to make considerable allowance in order to accommodate him. It seems that he had been experiencing considerable difficulty with other banks. A number had turned down his request for a loan. Yet he had a mighty good balance sheet to show.

"When I got through with him he stood up and said, 'Sir, I have learned a lot from this interview. Had I known in the past what credit really consists of I would have practiced greater care in my business dealings with other people.'"

## More Than Balance Sheet

Never before had it occurred to Mr. Jones that his business relations, past and present, formed an important basis for credit. To him the balance sheet had represented the sum total of credit collateral.

Credit is generally regarded as an expression in terms of dollars, and as one banker recently stated, "of confidence in the ability and willingness of a debtor to meet obligations. The basis of that definition is essentially confidence, as the basis of all credit must be confidence."

"The credit department has a compass by which it must chart all of its course, and the compass has four cardinal points", a well known banker said recently. "They are first, integrity, or character; second, ability or capacity; third, application; and fourth, capital. All risks in a credit department are measured by these four standards. The function of that department is to handle the credit facts bearing on these four factors."



DR. NORRIS A. BRISCO

Recently a group of prominent bankers got together for a discussion of the various phases of credit, both as they effect the banker and the merchant. The discussion was an interesting one, and to my mind, the most interesting statement was that made by a Philadelphia banker. He said that one of the most important sources of credit formation these days is the merchant's place of business.

## Personal Investigation

In the old days the banker was in the habit of inviting the applicant for a loan to his private office, and there secure all the necessary credit information. Nowadays, the banker pointed out, the banker goes to the man's place of business. He not only judges the merchant by his balance sheet but also by the appearance of his establishment and by his methods of conducting business.

Bankers are in the habit of securing a variety of information about their

customers. They go to the newspapers to learn how the merchant is regarded in his community. They go to the merchant's creditors to learn how he pays his merchandise bills. They go to his competitors to size up his business relations and his gameness.

"You know most credit risks," the Philadelphia banker said, "until they have gotten to a pretty bad point, take care of their bank credit, and if we depended alone upon our bank experience, we might think they were much better than they really are. But it is in the trade where they buy that we ascertain whether they live up to their terms, whether they observe their contracts, whether they are captious in the return of merchandise, and how people who sell them regard them. Competitive opinion, too, is valuable, although allowance must always be made for the competitive attitude. The opinion of a customer of a risk is equally enlightening.

There are other factors by which the banker judges the merchant, and it is well that the merchant should bear these in mind constantly. Above all, the merchant should realize that the banker wants more than a bare balance sheet. It must be supplemented with the merchant's trading account showing income and expenditures, and their applications to these assets.

## Sources of Information

The banker also delves into public records. He has constant recourse to the judgment index, the records of sales entered. The record of mortgages is not a mystery to him; nor is the record of real estate transfers.

From the mercantile agency the banker secures his information on the past history of the merchant, and he checks up on the accuracy of information secured from other sources.

And the merchant should not delude himself with the notion that banks are lacking in the spirit of coöperation when it comes to an interchange of credit information. I wish you could gaze into the information file of your banker's credit department.

You could see a detailed history of your business, and sometimes even a detailed account of your personal his-



tory. There you will find a collection of various financial statements submitted by you at various times. And these statements are analyzed and compared, with red ink underlining the unfavorable points. With that come the mercantile reports, and a series of memos of results of bank and trade investigations and records of interviews you had with the banker at various times.

#### *Collects Personal History*

You will find in some credit files a collection of newspaper clippings, each bearing on the personal history of the merchant. The banker does not neglect a single source of information bearing directly or indirectly on the business history of the applicant for a loan.

The banker is a keen judge of your business condition. He wants to know whether or not you are a good collector, and he can estimate pretty closely whether your accounts are being collected as rapidly as they should be.

Being a good merchant you figure the ratio of sales to merchandise. The banker is also a good merchandising man. He watches your turnover, and he knows when salable goods are accumulating on your counters. He knows when your business is being handled to your best advantage. He is very much concerned over your profits.

It would do the average merchant a lot of good to think over these facts, for he never knows when the banker will get his opportunity to investigate them.

Now you see the significance of my banker friend's story about Merchant Jones.

### **Selling On a Declining Market**

By CHESTER A. GAUSS

**Contractor-Dealers Should Watch Their Stock and Make Quick Turnovers**

Selling on a rising market requires no merchandising or business ability. Heretofore if goods couldn't be sold at a profit, all that the merchant had to do was to put them away on his shelves for a few months, place them on sale again and obtain the price desired, and in many cases he received even a higher price.

However, on a declining market conditions are exactly reversed. The longer goods remain upon a dealer's shelves the greater the loss that will be incurred. Often goods will change overnight from assets to liabilities and must be sold at a loss.

The secret of success in selling on a declining market lies in so handling stock as to have little or nothing on hand of the goods that decline in price. Offhand this statement may be taken to mean that one should buy all goods by the hand-to-mouth process. Such a method of buying, of course, would protect the merchant against price declines, but at the same time it would result in loss of business by not always having goods on hand to supply the demand.

#### *Study the Demand*

What the merchant should do is to avoid ordering in quantities that do not permit of a rapid turnover. There are certain classes of goods in all businesses upon which the turnover is very slow—once or twice a year. It is this kind of goods that the dealer should watch most carefully. As a rule they are generally those of high price, and the stock alone represents a considerable amount of tied up capital.

A study of the demand for such goods and the possible future demand under adverse conditions, should be a guide to the dealer when stocking such articles. Similarly the demand for the quicker selling goods should also be similarly studied.

One of the best ways of analyzing stock is to subdivide it into three classes, namely, luxuries, conveniences, and necessities. The demand for the latter class of goods is sure to remain almost constant in spite of business conditions. Prices on such goods are not likely to decline because of any variation in demand. Overproduction is all that can cause the prices of such articles to drop. Whether or not goods are being produced faster than they are being consumed can be pretty accurately determined by the ease with which goods can be obtained from manufacturers.

Convenience goods are likely to be in great demand as long as conditions are good for the buying classes. People will not do without conveniences until necessity forces them to do so. Hence, the demand for convenience goods is almost as staple as that for necessities, except that the merchant must remember that there has been a wild orgy of spending. This means that a large number of people have bought convenience goods, who in ordinary times would do without them. Now that this orgy of spending is rapidly disappearing, the sale of convenience goods is likely to drop off for two reasons: First,

because of the high saturation of the market; and second, because the market itself is declining. Convenience goods should hence be bought with care.

Luxuries are generally the first type of goods to be affected by any adverse business conditions. Luxuries have been sold in greater quantities during the past few years than ever before in the history of the world. Luxuries have not only been sold to the rich but to also what previously constituted the poorer classes. As business conditions become more and more normal and as the supply of labor becomes more nearly equal to demand, the working classes will have to cease purchasing luxuries. Luxuries are then the type of goods that the merchant should buy with the greatest care and in the smallest quantities in order to insure a rapid turnover.

#### *Necessities and Conveniences*

The electrical merchandising business is more stable than many other types of retail business, due to the fact that all electrical goods are either necessities or conveniences with the exception of highly ornate devices. But the mere fact that the electrical merchant is safeguarded against declines in prices to a greater extent than many other classes of merchants, should not cause him to neglect to take stock of his goods and his business and to so conduct his business as to keep his stock moving.

The first step that the electrical merchant should take is to study his stock and the rapidity with which he is turning over each line. Lines of goods that have failed to sell readily in the past should be pushed by special sales methods and advertising in order to get them off the shelves.

The second step that the electrical merchant should take is to analyze the demand for each line of goods carried; that is, to determine the classes to whom they are sold and the reasons why the goods appeal to those classes. He should then attempt to forecast the possible financial condition of those classes in the future.

The third step to be taken by the electrical merchant is to guide his buying in such a way that he obtains a good rate of turnover on all lines of goods carried by him. If he does this, a decline in the sale of any particular class of goods, or a decline in their price, will have but a minor effect upon his business as a whole.

# Catering to the Boys at Christmas Tide

By W. B. STODDARD

Many Pointers for Contractor-Dealers That Wish to Take Advantage of this Season of the Year by Appealing to the Youngsters

There are thousands of young American youths who are interested in wireless telegraphy, or in some phase of electricity, and the dealer who does not cater to these lads is losing not only a great deal of present business but future trade as well; for when these boys have grown a little older, and have homes of their own, it is safe to say that they will be equipped with all the electrical devices—and what is more natural than that they should patronize the dealer from whom they secured their youthful supplies?

If there has not been a department, or at least a section given over to juvenile electrical equipment, now is the time to start one. At the approach of the holiday season it is easy to make an appeal for this class of trade, for hundreds of fathers and mothers are eager to further the ambitions of their young Edisons, and are only too glad to learn of a place where these supplies may be obtained.

The Southern Electric Co., of San Diego, Calif., had the boys in view when they set forth their omnigraph window. This window had a background of electric blue cloth, and a mound in the centre covered with cloth of the same hue. On this were shown a half dozen different books on wireless construction, as well as coils, batteries and other electrical parts. Specimens of these were also shown on the floor. At one side was a card

## THE OMNIGRAPH

*Absolutely practical—for individual or class study*

The window was of the open back variety, and one could look into the department, which was given over to equipment for wireless outfits, not only for amateurs, but for professionals as well.

The Sterling Electric Co., Minneapolis, Minn., carried their idea of service to boys and young men still further. Early in the season they opened up their wireless campaign. At the Minnesota State Fair they had a large booth in the Electrical Building, in which they set up a wireless and daily sent and received messages. Large cards scattered over the booth announced that they were equipped to

handle all demands for wireless equipment, one of their adds reading

## RADIO TELEPHONE AND TELEGRAPH DEPARTMENT

*To keep up with the wonderful demand for wireless goods we have created a special department for this class of merchandise, with an expert on wireless telegraphy in charge.*

But what increased their popularity a hundred fold among the boys was the fact that they established a class in wireless telegraphy in their store. There was no charge whatever for admission to the class, but when they first advertised its inception they urged that all who wished to enter should register early, as owing to the comparative smallness of the lecture and demonstration room only a limited number could be taken, and it was a case of "first come; first served." This class met every Saturday morning from 10:00 to 11:30 and was in charge of a practical electrician, who explained both the practical and the theoretical phases of the subject. Special notices of the class about to be formed was posted in the booth of the Sterling Co., at the fair, and this publicity induced many to register as soon as they returned to the city.

The manager of the store announced that this plan of free instruction had proven very profitable during the short time it had been in effect, as the students not only bought all their class material

from the complete wireless stock carried by the firm, but in their weekly visits to the store saw many electrical conveniences that interested them, and furnished suggestions for Christmas gifts, or as convenient additions to their own dens.

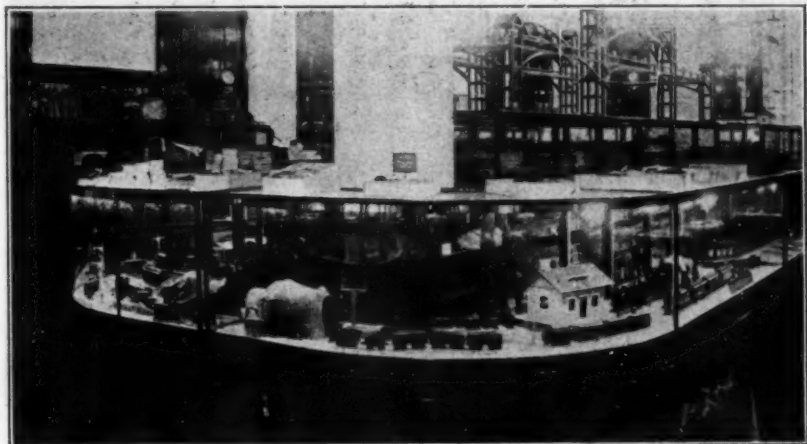
Frederick & Nelson, Seattle, appealed to the boys through the newspapers and by catchy window demonstrations. Their advertisement read

*BOYS—Of course you are interested in the wireless. Most American boys are. Here in Seattle the finest wireless apparatus in the world is produced. Sets that were just made for a boy to interest him in this fascinating occupation, so that he can send, receive and listen in the most approved manner.*

*Every afternoon from 3:05 to 5:00; and every evening from 7:00 to 9:00 a boy will demonstrate these sets; and show how easy it is to send and receive a message with one of these practical little sets.*

A list was made up of boys of the high school and grammar grades, and a special invitation was sent to all of them to come and watch the youthful operator at work. A big card in the window advised

*Come in and ask any questions you wish regarding the construction or operation of the wireless at our electrical section.*



Electrical Toy Department of Marshall Field & Company, Chicago

One of the most interesting methods of linking wireless control with various kinds of electrical merchandise was that adopted by the Southern California Electric Co., Los Angeles, Calif. They rigged up a window filled with electrical appliances—a half dozen fans, sewing machine and electric lamp. A card set among the fans observed:

**BEST FAN FOR HOME USE**

*Pleasing in appearance*

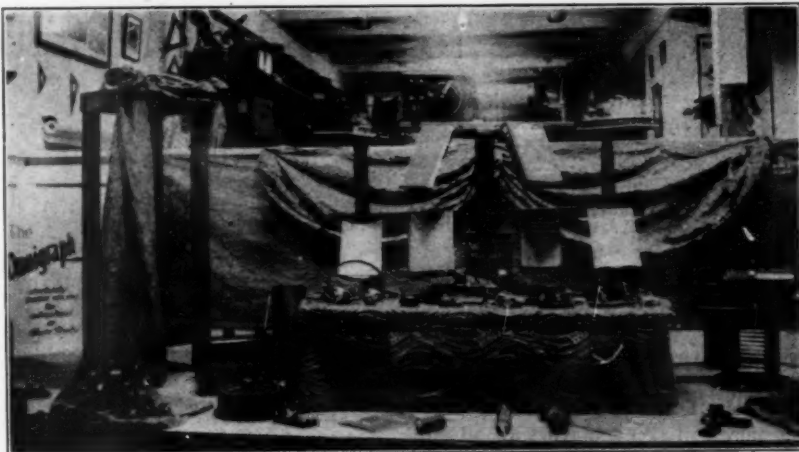
*Great in economy*

*Light in weight*

*Gives the most breeze for least consumption of electricity.*

Over the card was an electric lamp with blue shade. In the centre of the display, on a mound of blue velvet, was a wireless outfit. A button was attached to the glass surface of the show window and a card pasted to the glass suggested: "Run the electric appliances by means of wireless control. Push the button." By doing this the lamp would flash, the sewing machine motor run, the fans start to whiz, and blue sparks would be emitted from the wireless. Blue and white cards gave the name and price of each appliance.

The Reuter Electric Shop, Cincinnati, Ohio, made an irresistible appeal to the lad interested in wireless telegraphy. The window was backed with blue and white bristol board set in white frames. In the centre was a big white card lettered in red and blue



Window Display of the Southern Electric Company of San Diego, California

**UNCLE SAM WANTS YOU FOR A WIRELESS OPERATOR**

*We sell learners sets with complete instructions for use*

Several of these wireless outfits were attached to the bottom of the cards.

But while catering to the youths the younger children should not be forgotten. If they buy their electrical toys at one place for several years they will look to that store for their supplies when they reach the constructive stage of electricity.

Marshall Field & Co., Chicago, realize fully the benefit of the children's trade, and in their boys' department there is an entire section given over to electrical toys. In a large horseshoe

show case last season they erected an entire village, with houses, trees, hills, tunnels, etc. There was a series of electric light posts in front of the houses, and when the small electric train that made the circuit of the entire show case, reached these poles the lights would flash. On top of the case were shown a number of different styles of flash lights.

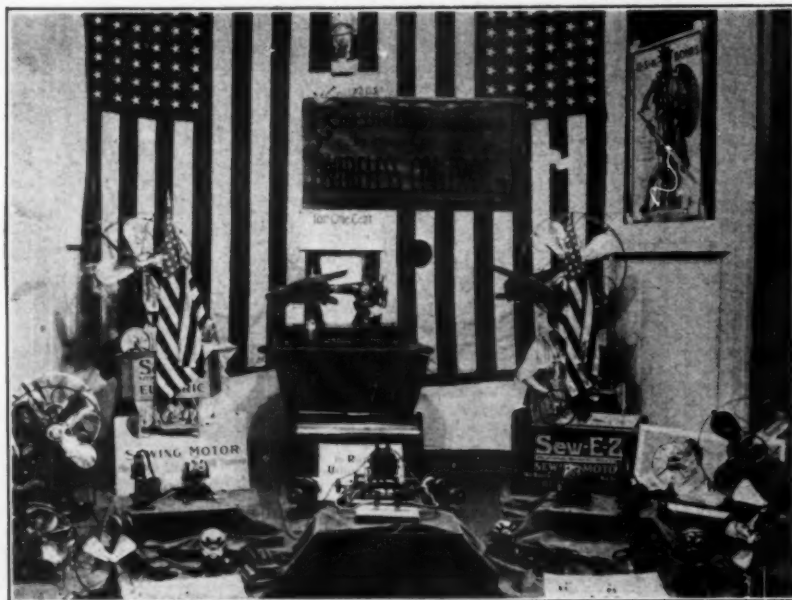
J. W. H. Fuchs, Wilmington, N. C., likewise catered to the juveniles but instead of making a display inside he arranged it in his window, where it became the object of great interest to the youngsters, and caused every one to wish Santa to bring him a similar train.

The window was floored with white felt, and a mound in the centre was also of this material, the whole being sprinkled with powdered mica to represent snow. On top of the mound was a toy house, with two little dolls and a dog in front. Down along the front of the window and extended through the tunnel beneath the mound was a miniature track, around which whizzed a toy engine pulling half a dozen cars, at one corner of the window were piled flash lights with a card "Just the thing when you are on a hunting or fishing trip and get into camp after dark." At the other side were shown several complete wireless outfits, with a card

**FOR THE BOY WITH AN ELECTRIC TURN OF MIND**

*Visit our ELECTRIC TOY DEPARTMENT and see our complete line*

A holiday effect was given to the display by a border of paper icicles hung from the top of the window; while all around the wall were garlands of evergreen, studded with tiny electric bulbs of yellow, red and green.



Wireless Control Display of Southern California Electric Company, Los Angeles, California



# Enterprising Canadian Electrical Contractor-Dealers

BY WILLIAM BLISS

Modern Methods of Merchandising Pursued by Stores in the Northwest Country as Observed by Our Special Correspondent

Prince Rupert, far up on the north-western coast of Canada, less than eight hours' journey from Alaska, is the home of a very thriving electrical merchandising concern—the Prince Rupert Electric Co. One entire side of the store is devoted to electric lamps and fixtures, the latter being hung from the ceiling and presenting the same aspect as when placed in the home. Over the counter is a rack holding bulbs of various candle power, from the highest to the lowest. The other side of the salesroom is given over to the larger commodities such as washers, cleaners, ironers, etc.

A neat grey partition separates the repair shop from the salesroom, and over the arched doorway is printed: "Lighten the Labor of the Home; Do It Electrically." One display window was recently devoted entirely to a showing of storage batteries, coils of wire and wall boards, while a card, placed on an easel, with ribbons running from it to each object in the window, gave the price of the apparatus.

The British Columbia Electric Railway Co., Vancouver, B. C., just at present are making a drive for the sale of their electric vacuum cleaners, and a recent ad showed the picture of a residence with open door, which was captioned

**THE DUST FROM OUTDOORS**  
disappears from your homes as if by magic when you use a Blank  
**ELECTRIC VACUUM CLEANER**

You can't let the fresh air in and keep the dirt out. Keep your windows open to welcome the invigorating air. An

**ELECTRIC VACUUM CLEANER** will make it an easy matter for you to keep your rugs and draperies fresh and clean. You simply run your Cleaner over them. No violent brushing—no dust pan—no broom is needed. It will gather up the dust and dirt from portieres, upholstery, etc., as it blows in from the street.

Special demonstration given in our sales room by factory experts.

A very attractive window display was recently staged by this concern, one of the outstanding features being a number of catchy cards—a feature too often omitted by the window dresser—thus causing the window to be dumb, for no matter how pleasing the appearance of the merchandise, the would be purchaser wants to know something specific regarding it.

For instance, when electrical goods are displayed the passer by wants to know not only the price, but what that particular utensil will accomplish. It was to answer questions such as these that the window was installed. It was floored and backed with blue-black cloth, with two small palms for relief. Down in front were a row of tungsten lamps of different sizes, while on a low table in the rear was an electrical ovenette. A card beside it advised "An ovenette will transform your electric grill into a complete table range." At the base of the palms were two larger cards: "No need to cook on a hot coal or wood range; use the handy electric grill. Attach to any lamp globe," and "Don't start your kitchen range for every little cooking operation—Use the handy electric grill."

Beside a percolator was a card: "Six cups of delicious coffee can be made at a cost of one cent for electricity," and "If you enjoy good coffee, this electric

percolator will interest you." A toaster had cards "Enough toast for five persons, on an electric toaster, for one cent" and "Toast—crisp, tasty, fresh made right at the table with an electric toaster." Several attractive lithographs, supplied by the manufacturer illustrated the uses to which the electric appliances could be put.

The Burnham-Frith Electric Co., Edmonton, have paid considerable attention to the pushing of electric lamps and fixtures. A recent ad on the subject declared:

## REAL HOME COMFORT LIGHTING

*Benefits the Entire Family*

*This is assured by the installation of "the lamp of a thousand positions"*

*In the Dining Room—no dark corners; no glare on white table cloths.*

*In the Living Room—a pleasant, cheerful, all-over illumination*

*In the Library—a restful reading light, easy on the eyes*

*In the Bedroom—more light than ever before, easy to dress by*

## SPECIAL TERMS THIS WEEK

They supplemented this with a window full of fixtures and globes of different kinds, with a card advertising a 25% reduction for one week only.



A Neat Window Trim From Canada—British Columbia Electric Company, Vancouver, B. C.

The Northern Hardware Co., Edmonton, have adopted the plan of advertising their electrical merchandising department on a big billboard on one of the principal streets. In the centre is the life size painting of a woman using an electric iron, while in little circular discs all around the border are shown the use of toaster, percolator, vacuum cleaner, washing machine, vibrator, and hot water heater. Beneath is printed "Our popularity Proves that People Appreciate an Extensive Line of Electrical Conveniences."

The manager advised that this billboard advertising was just preliminary to launching an electrical Christmas campaign, and that they expected to pay much attention a little later to the featuring of electric lights for the tree, electric toys, and a complete line of electrical appliances for the convenience of the housewife, as well as flash lights, and electric fishing poles for their masculine patrons.

The Wheaton Electric Co., Saskatoon, showed in their window an electric washer and an electric range. They realized the value of cards, for the display was embellished by several very effective ones: "No woman should do any labor that a machine can do," "Why slave? Washing with an electric machine is a pleasure." A series of cards lettered in red were set about, with ribbons running to the different parts of

the electric range, and each gives some reason why that particular stove should be purchased. Another larger card proclaimed "The stove that does not require an expert to put in a burner or make repairs."

#### Another Good Window

One of the most attractive windows of the season was that of Ashdowns, Winnipeg. The background was of pale green, with a large oval panel in pastel tones. At one end was a bench with two big tubs, wringer and washboard. Cards beside it advised "Do you still use the old fashioned tub and washboard in your home?" and "It's time for a change—Get an electric washer." At the other end was an electric washing machine in operation. A handsome polished bench held a number of electric irons and the display was enlivened by a tall vase holding red flowers and foliage. The window was completed by another card which advised "The electric washer makes a large washing look small. It does the work quickly and thoroughly."

Realizing that with the shorter days would come the demand for better lighting facilities the Standard Electric Co., Swift Current, Sask., devoted the greater part of its energies to pushing lighting fixtures and lamps. They prepared a very attractive leaflet, headed with the picture of a beautiful girl gaz-

ing into a mirror, beneath which was printed

#### A REFLECTION OF BEAUTY

*is that caused by our artistic and practical electric light fixtures. A combination of the beautiful and the utilitarian appeals to every home lover. We earnestly invite your inspection of our extensive line of fixtures, suitable for every room in the house. We also invite a comparison of prices.*

Their own shop was the exemplification of good lighting, and the cheerful glow of the many rose and golden shaded lights was especially pleasing on the short and gloomy autumn days. A card over the entrance invited:

#### ENTER THE SHOP O'LIGHT

*Choose from among the many fixtures and lamps shown here, and make your own home bright and cheerful for the good man and the children during the long winter evenings.*

STATEMENT OF THE OWNERSHIP, MANAGEMENT, CIRCULATION, ETC., REQUIRED BY THE ACT OF CONGRESS OF AUGUST 24, 1912, OF ELECTRICAL CONTRACTOR-DEALER, published monthly at Utica, N. Y., for October 1, 1920.

STATE OF NEW YORK, } ss.  
County of New York, }

Before me, a Notary Public in and for the State and County aforesaid, personally appeared W. H. Morton, who, having been duly sworn according to law, deposes and says that he is the General Manager of the ELECTRICAL CONTRACTOR-DEALER, and that the following is, to the best of his knowledge and belief, a true statement of the ownership, management (and if a daily paper, the circulation), etc., of the aforesaid publication for the date shown in the above caption, required by the Act of August 24, 1912, embodied in section 463, Postal Laws and Regulations, printed on the reverse of this form, to wit:

1. That the names and addresses of the publisher, editor, managing editor, and business managers are:  
Publisher, National Association of Electrical Contractors and Dealers, 110 W. 40th Street, New York, N. Y.

Editor, Farquison Johnson, 110 W. 40th Street, New York, N. Y.  
Managing Editor, none.  
Business Manager, W. H. Morton, 110 W. 40th Street, New York, N. Y.

2. That the owners are:  
The National Association of Electrical Contractors and Dealers. Not incorporated. Composed of 2,000 members, of whom principal officers are:

W. Creighton Peet, Chairman, 70 E. 45th Street, New York, N. Y.  
W. H. Morton, General Manager, 110 W. 40th Street, New York, N. Y.

3. That the known bondholders, mortgagees, and other security holders owning or holding 1 per cent or more of total amount of bonds, mortgages, or other securities are none.

4. That the two paragraphs next above, giving the names of the owners, stockholders, and security holders, if any, contain not only the list of stockholders and security holders as they appear upon the books of the Company, but also, in cases where the stockholder or security holder appears upon the books of the Company as trustee or in any other fiduciary relation, the name of the person or corporation for whom such trustee is acting, is given; also that the said two paragraphs contain statements embracing affiant's full knowledge and belief as to the circumstances and conditions under which stockholders and security holders who do not appear upon the books of the company as trustees, hold stock and securities in a capacity other than that of a bona fide owner; and this affiant has no reason to believe that any other person, association, or corporation has any interest direct or indirect in the said stock, bonds, or other securities than as so stated by him.

(Signature of) W. H. MORTON,  
General Manager.

Sworn to and subscribed before me this 22nd day of September, 1920.

AUGUSTA WOSKOFF,  
(My commission expires March 31, 1921.)



Here's a Window Display From Winnipeg, Man., Showing That They Are Very Much Alive in Canada

# Sale of Motors for Industrial Uses

By JOHN A. CLARK.

Paper Delivered at Baltimore Convention by Manager Merchandising Section of Westinghouse Electric and Manufacturing Company

The enormous development of American industries during the past twenty years becomes more apparent when measured in terms of horse power. Increasing from a half million horse power consumed twenty years ago to the striking aggregate of eighteen million horse power today the consumption of electrical power has expanded over 3,000 percent. This is accounted for by the growing use of electrical energy in most industries and the electrification of old plants. Electric motors have been winning universal favor for service which formerly used steam, gas or gasoline engines. This is because of the greater advantages of central station service and the marked economy attending the use of electric motors.

In 1899 electric horse power equalled only 5% of that for all primary horse power. Today, that percentage has increased to 60%. These salient facts of past developments, when studied with the advancing steps of evolution, afford a working basis for making future estimates. In short, reliable authorities predict that electrical power in 1924 will reach the total of thirty million horse power.

## Opportunities for Contractor-Dealers

The growth in use of electric power should be of direct interest to the contractor-dealer because this growth means a rapidly increasing demand for motors and controllers in the industrial field, as well as wiring devices and electrical apparatus of all kinds, together with skilled labor required to plan, install and maintain such equipment.

The contractor-dealer is in a unique position to meet the need of those local industries and users which are common to every city, town and community. We refer to wood and metal working shops, garages, bakeries, laundries, creameries, printing establishments, clothing manufacturers and many other local manufacturing or service enterprises. These are usually not equipped to intelligently select suitable electrical equipment, nor can they ordinarily install nor maintain it.

We forecast great future development in electrifying these smaller industrial and service users during the

next five years. The great shortage of domestic labor during the last two years has attracted the attention of the contractor-dealer to the field of household appliances. Smaller industries and service users have been in many instances overlooked, and with more normal conditions in supply and demand coming upon us, with the necessity of increased sales effort the wise contractor-dealer will stabilize his organization by closer attention to the class of purchaser to which we refer here.

We see at least two other peculiar factors which will also increase the demand for electrical equipment on the part of the small industrial and service user. First is the fuel problem. Fuel scarcity usually favors the use of electric power, for electric drive is more efficient and economical in most instances than any other form of drive. Second, there is a concerted effort to reduce fire hazard and increase the personal safety of workmen. These lead to the revamping of driving equipment and its control on replacing old equipment with new or adding safety devices.

## Building a Motor Business

Every contractor-dealer has his own local setting. Surrounded by numerous industries the contractor-dealer represents a hub in the wheel of local business. But almost every district is different. Circumstances peculiar to one locality are not always common to another. To build a substantial business the contractor-dealer should make a study of his local surroundings first. Then the fundamental of good business practice can be applied in a way which will best fit the local conditions.

Business possibilities which exist in the immediate town or locality should not be overlooked. Sometimes one is tempted to solicit business in other towns or distant points. But experience proves that concentration and intensive effort in one community builds up prestige and good will. Such policy goes a long way toward eliminating competition and increasing profits.

Also many contractor-dealers have found it profitable to select their work. To figure on every job that arises usually proves expensive practice. Where a contractor-dealer is especially suited to

take a certain class of work it would seem desirable for him to neglect others and specialize upon it.

Further, some contractor-dealers devote most of their attention to the sale of household appliances and supplies. Others concentrate on electrical construction. Each requires specialized effort. This has been proved by the success of those who abandoned the one to specialize on the other. Those contractor-dealers who engage in both should therefore give specialized effort to both.

Customers usually take their electric current from central station lines. This makes them dependent upon the central station for service. Consequently the merits of central station service should be explained to customers when selling motors. This helps to close sales. For it must be remembered that the customer is concerned not only with the merits of the apparatus, but also with the service resulting from the use of this apparatus.

Central stations are cooperating with those contractor-dealers who are capable of properly servicing the industrial trade. Because central station business was built up on service the central stations feel they are responsible to their customers for the service which contractor-dealers render on motor and appliance sales. Consequently the degree of cooperation received from the central stations, in many cases rests with the contractor-dealer to improve his facilities for engineering, laying out, installing and servicing industrial customers on electric motors. The more capable the contractor-dealer becomes in this respect the more cooperation can be expected from the central station.

## Manufacturers and Jobbers.

Often the manufacturer or the jobber can assist the contractor is closing certain motor sales. At least, occasions arise where a better understanding with the contractor would prevent competition by the manufacturer or the jobber. There undoubtedly exists sufficient latitude for a better understanding and consequent cooperation by the manufacturer, the jobber, and the contractor-dealer. This condition has shown marked improvement in recent years.

The contractor-dealer is usually



called upon to install pumps, blowers, fans, compressors and other machinery bought by local industrials from machinery manufacturers and their agents. These machinery agents are, therefore, in a position to give the contractor-dealer considerable installation work. Contractor-dealers who find this profitable business will do well by cultivating the good will and cooperation of such agents.

Further, every installation of this kind usually means a new customer, or at least new business for the contractor-dealer. The customer has a tendency to call on the contractor who installed his machinery when he requires repairs and additional equipment. Also a close friendship with machinery agents gives the contractor-dealer a point of contact with many jobs which he otherwise may not hear.

In any business proper banking connections is of vital importance. In the motor business especially, sound banking relations is a controlling factor. Motors run into money. Consequently a contractor cannot hope to engage in the sale of motors to industrials unless he is assisted by loans from his banker. To borrow money from local bankers is not usually an insurmountable difficulty. Most bankers would like to assist the dealer in building up his business and consequently his account at the bank. Every contractor-dealer should therefore give his confidence to the banker. Let the banker know the importance of the electric business. Show him facts to prove that the developments of the local industrial community is largely dependent upon the expansion of the contractor-dealer.

#### *Efficiency and Growth*

For every business establishment a comprehensive outline plan of the organization should be carefully worked out predetermined so as to coordinate harmonious relations within the company. A complete plan of this kind will also afford a well designed frame work to be enlarged as the business grows. Like all other well regulated lines of business the contractor-dealer in turn should give serious thought to a plan which will create efficiency in his immediate organization. As his business grows, he will then be enabled to properly delegate increasing responsibilities. And there will be little or no disturbance of internal relations resulting from the outgrowth of his original organization.

The contractor-dealers' business is

not so specialized as that of other merchants. The scope of his work covers many lines of endeavor. He must be a merchant, an engineer and a contractor. If he is not all three, then he may build up a personnel which can function for him in these respective capacities. In all of these different phases of industrial business the contractor or his organization must be of expert calibre. Consequently it is all the more necessary that the contractor-dealer give his serious consideration to the introduction of system and careful planning in building up his organization.

The public is showing a growing tendency to purchase electric appliances through electrical channels. Fans and blowers, tire pumps, small lathes, drills, grinders and many other small motor driven appliances should therefore be handled and exploited by the contractor-dealer. Many of these appliances can be sold by proper advertising and displays. In many cases appliances of this kind can be sold with wiring jobs. Often extras sold when installing new, or additional wiring exceed the sum for the wiring itself. Contractors who sell these appliances along with wiring installations, will be making every job pay a handsome profit.

A reputation with industrial customers is not established by one difficult sale, but by a great number of small sales all of them comparatively easy to make and every one backed up by attention and service. Shop and mill managers buy motors for the one single purpose of deriving use or service from them. And they consequently buy from one who is handy to their call and dependable for response in time of emergency. Also they have their problems arising daily. They want to do business with one who understands their business; one who knows motors; and as a result one who can render them valuable aid in the solution of their problems.

Industrial customers expect service at any hour, day or night. When a motor goes bad they want a new one while the damaged motor is being repaired. Moreover, repair business is usually profitable to the contractor-dealer. Also such repairing saves the time lost in returning damaged motors to the factory.

Delivery is also a big item in rendering service. Keeping a stock of motors commonly used enables immediate delivery. The trade usually patronizes the contractor who always has

the equipment ready for their use. Further, if old motors are bought up or taken in trade, a miscellaneous stock is built up which assists the contractor in satisfying many demands. Times arise when the contractor does not have in stock a motor that will suit the customer's application. In such cases he may be able to modify some motor on hand. Often occasions arise where slight modifications in the motor or control will be the means of giving the customer immediate delivery.

Many people wait until the last minute to order their motors. When factory deliveries are slow, failure to order in time often results in expensive delays. Some contractors have found it good business to anticipate their customers' requirements. By ordering in time the motors will be waiting in the dealer's stock when the customer needs them. Many other opportunities arise which would enable the contractor to become better established with his industrial customers by rendering timely service. The biggest asset the contractor has is his natural advantage to give service. And contractor-dealers should be making rapid strides toward building up good will and a permanent business by seeking opportunities to serve his customers.

#### *Intelligent Buying Increases Profits*

Intelligent buying usually results in fast selling. In every store regardless of its size and kind, the buyer must aim to satisfy the demands of this trade. The habits of the store's patrons, their tastes, income, standard of living, extent of seasonal buying; etc., must be carefully analyzed and reckoned with by the store manager.

But certain other fundamentals of good business practice also enter into the problem. Of these stock turnover is of paramount importance. The profit made on each sale, when multiplied by the number of turnovers in a year gives the total profits accruing from the business. Profits therefore should be balanced with the number of turnovers to realize the greatest annual amount. Although necessary to carry sufficient lines and styles to satisfy the trade, still the number of lines that are profitable to carry will be dependent upon the possibilities of making fast turnovers with each. Too many lines carried in stock handicap the possibility of profitable turnovers. Goods which do not move fast eat up the profits of fast moving lines.

Some buyers make their purchases by budget. From estimates of total annual business, number of lines, styles, price ranges, etc., the buyer can figure the total amounts of each for his annual requirements. By analyzing the separate items, giving relative importance to the respective lines, and by being guided by the amount of available capital for stock, the dealer can arrange a budget to cover the year's purchases.

Selling motors involves everything else that goes with the installation of motors. The contractor who sells the motors usually installs them also. The installation requires control apparatus, switches, safety devices, fuses, lamps, conduit wiring and supplies. Motors are not sold like most commodities. Engineering advice and service usually attend the sale. Then the motor must be installed. The same study and thoroughness exercised in applying the motor should also mark the selection and use of the equipment that goes into the motor installation. For this reason dealers should devote more attention to a study of the functions and relative merits of this auxiliary apparatus. Every contractor should aim to handle and sell all the electrical equipment used in the installation of motors.

#### *Advertising Stimulates Sales*

Business does not exist in any fixed amount. It must be created. This cannot be done waiting for buyers to enter the dealer's store. Apparatus must be displayed and advertised. This applies to motors as well as to appliances. Most contractor-dealers employ modern methods in selling appliances but motors are sometimes neglected. They are not advertised nor displayed.

At first thought it may appear that motors do not lend themselves readily to attractive displays. But a little thought and planning will enable the resourceful dealer to arrange effective displays. These can be made to outstrip all other appliances in drawing attention to the show window. Motors can be used to introduce motion effects. Some dealers make wooden or card board models. These are usually of simplified construction. In most cases however, the model demonstrates the use of motors with certain devices. Displays of this kind both in the store and in the show windows are effective.

Some contractor-dealers have a platform built about six inches from the floor running along one side of their store. On this platform motors of va-

rious sizes are arranged to give them prominence. This creates a favorable impression upon all who enter the store. Special platforms or stands are sometimes arranged in the center of the store and located near the door. A motor operated device attracts the attention of everyone entering the store. A placard listing some of the many uses of motors serves to drive home the story of motors to save time and labor.

In their advertisements in local papers some contractor-dealers do not stop with an illustration of a washing machine, ironing machine, etc. They go further by calling attention to the importance the motor plays in these devices. They point out that these same motors are obtainable at the dealer's store for use on other devices. The names of machines and appliances adaptable to motor drive are usually mentioned.

The use of sales letters to circularize the local trade has proved very effective in building up motor sales. Every month a letter may be sent to all the surrounding industrial plants. These may be arranged in a series. Their purpose is to describe the contractor's ability to engineer, lay out, and install motor installation. The service which the customer can expect is especially emphasized. Subsequent letters contain stock sheets showing the line of motor carried by the contractor. Following these letters the contractor may give a solution of certain motor problems which he believes may be confronting his customers.

Every contractor-dealer should have a mailing list. This enables him to circularize his customers with manufacturers' and jobbers' advertising literature; month stock sheets; notifications of price changes; new developments in the industry; etc. A mailing list gives the contractor-dealer a clientele and enables him to keep in close touch with his trade. A complete list of customers facilitates sales promotion campaigns; enables a thorough study of the number and class of his customers; and makes it possible for the dealer to plan and manage his business with greater precision as regards to all details.

The average buyer is beginning to know something about motors. Electrical advertising and educational movements are getting results. Buyers are therefore read up on the motor they believe they need. And it is necessary for the contractor to show that he knows

more about motors than his customers. It has been found good practice to submit a written proposal, regardless of the size of the job. A diagram or sketch should accompany the proposal. Usually a descriptive leaflet illustrating and describing the motor is attached. A short writeup describes the service and explains the particular merits of the motor which qualify it to meet the requirements of the service. This method of approaching the customer has proved very effective. The proposition is complete in every detail. The buyer is enabled to read over the whole plan several times. He is apt to forget many things explained verbally. Because the written proposal enables him to read it over many times, the buyer studies the contents and is influenced by the arguments set forth therein.

The development of new and improved electric apparatus has gone hand in hand with the increasing demand for electric power. And today we can proudly review our past advancement, realizing the imposing position which the electrical industry has attained in the world of industry. But the future is of greater interest, and we should give our attention to plans which will enable us to capitalize the past in building for the future.

New fields await improvement through the development of better methods and new apparatus. Old fields offer opportunities for exploitation through the use of existing or recently developed apparatus. It therefore remains for those who form a part of the channels of distribution to improve their methods; to increase their efficiency; to broaden their scope; and to build up their resources and power, so as to become a more imposing part of the plan of distribution and benefit by the progress of the electrical industry.

### **Teaching Chinese**

The Chinese Government College of Posts and Telegraphs has sent four Chinese students to this country to study the latest methods of telephone manufacture. They arrived in Chicago late in September and reported to the works of the Western Electric Company at Hawthorne where they will begin a training course which will last two years. After they have completed their course they will return to China and assume executive positions in the development of the telephone system of their native land.

## Minnesota Fair Displays

**Electricity Cuts Large Figure and Local Firms Well Represented**

Electricity was a most important factor at the Minnesota State Fair, and the great domes of the Agricultural and Horticultural Buildings as well as the Hippodrome where was held the great fireworks spectacle would not have stood out in a blaze of light as they did at night had it not been for this twentieth century wizard. Electrical exhibits of many of the dealers were scattered through a number of buildings, but by far the largest group was concentrated in the Electrical Building, wherein it was shown that electricity could accomplish almost any task of the house, farm or business.

The big white building had the ceiling hung with long festoons of green and gold bunting, and one end almost covered with greenery. Around each of the big white pillars were twined ropes of evergreen and pink paper roses, while from each large dome light hung waterfalls of red and green paper. Among the many electrical firms were noted.

The Universal Light & Power Co. featured lighting plants for the farm, and showed how washing, ironing, cooking, and cleaving could be accomplished with one-quarter the labor by having an electric maid.

The Northwestern Electrical Equipment Co. had a booth draped in red, wherein they exhibited a good collection of cells and batteries.

The Durnam Airway Sales Co., Inc., featured the Crystal washer, and had one of these machines in operation most of the time.

The Globe Electric Co. featured cells and batteries.

The Automatic Electric Washer Co. carried a well selected stock of their washers, on distributed much informative literature on the subject.

The Hoover Suction Sweeper Co. had a booth with green carpet, on which a maid gave daily demonstrations of the use of the cleaner.

The Bluebird Washer Co. had their booth decorated with blue birds and the entire background given over to a panorama showing their plant.

The Alson Bottger Electric Mfg. Co., Alamo-Minn. Light Co., and the R. M. Laird Electric Co. had attractive exhibits of the respective line of electric washing machines handled by them.

P. W. Miller Co. featured electric

light plants, and showed a number of plans for the installation of same.

The St. Paul Electric Co. had a comprehensive showing of the fans, heaters, washers and sewing machine motors handled in their sales room.

The Western Electric Co. displayed an assortment of batteries.

The Peerless Electric Co. divided their display between their washing, ironing and rug cleaning machines.

The 1900 Washer Co. had a very striking display, the background being indigo blue upon which were applied flame color leaves. Tall deep blue vases held branches of the same, and in the midst was a platform upon which stood an electric washing machine in operation.

The A. Y. McDonald Mfg. Co. had their booth fitted up as a complete bath room, with pipe connections showing the flowing water. A card announced: "Water supply furnished by the McDonald electric water system."

The Gainaday Electric Co. was another concern that had a striking display, the background being of checked orange and black, and the chairs and settees similarly upholstered. Washing and ironing machines were featured and visitors could watch the demonstration while resting.

The Fort Wayne Engine and Mfg. Co. showed the components of a water supply system, and gained the favor of the ladies by distributing aluminum thimbles, with their name engraved in a blue band on the end.

The N. W. Electric Equipment Co. dealt in washers and irons, and had one of the latter machines in operation.

The Sterling Electric Co. featured all

kinds of electric household conveniences, and had a portion of their booth devoted to a radio display. They advertised that all the apparatus necessary for the construction of a radio outfit could be secured at their sales room.

The Puffer-Hubbard Mfg. Co. showed their washing machines.

The Findley Electric Co. showed a refrigerating machine, dish washer and washing machine, and above the latter was a sign "Eliminate the drudgery of a long wash day."

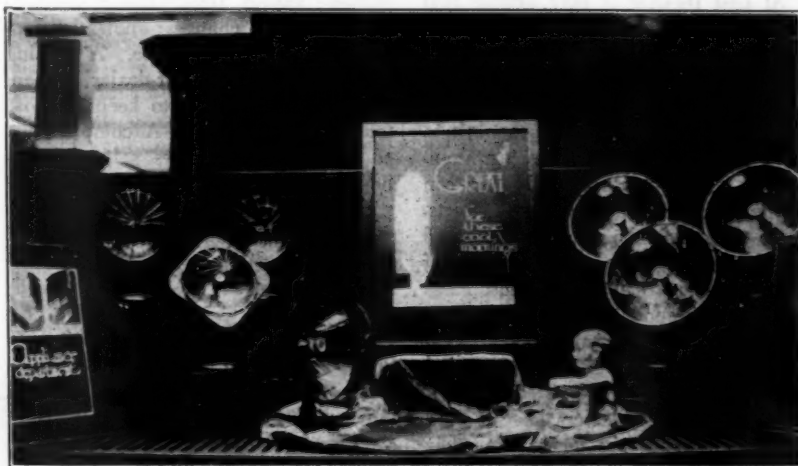
G. F. Schonek told visitors the advantages of Delco light.

In addition to the long list of exhibitors in the Electric Building there were other scattered through the buildings devoted to textile exhibits. One of the most attractive of these was the Electric Shoppe, who had a room fitted up in grey, with cretonne hangings, where they disclosed various household conveniences, specializing on the laundryette.

The Nagell Hdw. Co., Alferd J. Krank, and Foster-Carpenter Co. combined to show the Liberty washer, which was in constant operation.

The Powers Merc. Co., featuring the Wayne washer, had a machine in operation, and above it a framework on which was a hobby horse that rocked with the motion of the machine. They offered a washing machine free to the person guessing nearest the number of times the horse would rock during the week of the fair, distributing coupons for that purpose, on which the contestant wrote his name, address and estimate.

Many of the stores of Minneapolis and St. Paul arranged special electric decorations for the fair crowds, the most



Display Window of the Minneapolis General Electric Company



elaborate being that of Donaldsons, of Minneapolis. Each window of their big five story building was outlined in strings of lights of red, yellow or green, while the big dome was a mass of red lights, with border of yellow, and the tip a mass of green. Upon the fifth floor was a huge American flag of lights in the national colors, while a big red border sign flashed the name "Donaldsons" in yellow lights.

The Minneapolis General Electric Co. had a splendid display of heaters, featuring them extensively for early fall use. A handsome window was floored with black and white striped silk, over which was a drape of rose pink velvet, on which was the figure of a chubby child holding out his hand to the cheerful blaze of an electric heater. The window was well balanced by a showing of three heaters on either side. In the center was a black card in a walnut frame, on the panel being printed "GREAT for these cool mornings." A similar card in the opposite window advised "See our Appliance Department. Come in; glad to show you."

The Gainaday Electric Co., in addition to their booth at the Fair had a decidedly attractive window, which brought to a halt all who passed. Overhead was a line of clothes held in place by wooden clothes pins. To each garment was attached a card: "Pays its way, Try it today," "Automatic friction clutch to prevent fuse blowouts,"

"Strong wringer, swings and rocks in any position," "All gears and moving parts enclosed," "Washes everything quickly, gently and efficiently," "Light weight zinc cylinder" and many others. Two figures were shown, one a drooping figure of a woman standing by an old fashioned tub and bearing a card: "Too tired to move;" and another smiling figure in morning dress standing beside an electric washing machine, with a card "Watches assistant do the work." Between them was a card with a big red interrogation point: "Which? Mr. Man, if you did the washing, which would you demand?" The window was of the open back variety, and in the rear could be seen an ironing machine, as well as an electric iron placed on a board.

### Changes in Code

To save time and trouble for those who often refer to it, Thomas H. Day of Hartford, Conn., president of the Western New England Association of Electrical Inspectors, has noted the changes that appear in the National Electrical Code, just issued, as follows

- Rule 1, Section c, second paragraph.
- Rule 1, Section d, a new (7th) paragraph.
- Rule 4, Section c.
- Rule 7.
- Rule 8, Section a.
- Rule 8, Section b, all paragraphs.
- Rule 8, Section c, all paragraphs.
- Rule 8, Section f, all paragraphs.
- Rule 12, Section a, now has five paragraphs.

- Rule 12, Section b, both paragraphs.
- Rule 12, Section c.
- Rule 12, Section d, now has three paragraphs.
- Rule 12, Section e, now has but one paragraph.
- Rule 12, Section f, now has but one paragraph.
- Rule 12, Section g.
- Rule 13, Section c.
- Rule 13, Section d, now has but one paragraph.
- Rule 13, Section e, the table.
- Rule 14.
- Rule 15, Section a, both paragraphs.
- Rule 15, Section b.
- Rule 15A, Section d, 1st and 2nd paragraphs.
- Rule 15A, Section i, third paragraph.
- Rule 15A, Section j, first and third paragraphs.
- Rule 15A, Section k, second and third paragraphs.
- Rule 15A, Section m, second paragraph.
- Rule 15A, Section n, third, fourth and fifth paragraphs.
- Rule 15A, Section p.
- Rule 15A, Section q, first paragraph.
- Rule 15A, Section q, a new (second) paragraph.
- Rule 15A, Section q, present second paragraph becomes the third.
- Rule 15A, Section r, first paragraph.
- Rule 16, Section i, this is a new section.
- Rule 17, Section c, this becomes Section b.
- Rule 17, Section d, has been changed and becomes Section c.
- Rule 18, a new paragraph has been placed at the beginning of Rule.
- Rule 18, Table I, a new Table "B", for capacities of Varnished.
- Rule 18, Table I, present Table "B" becomes Table "C". (Cloth)
- Rule 18, Table II, a new Table for "Standardized Stranding."
- Rule 19, Section a, second paragraph.
- Rule 19, Section b, first paragraph.
- Rule 19, Section f, this is a new section.
- Rule 23, Section a, second paragraph.
- Rule 23, Section a, a new (third) paragraph.
- Rule 23, Section a, present 3rd paragraph becomes the 4th.
- Rule 23, Section d, a new (second) paragraph.
- Rule 23, Section d, present 2nd paragraph has been changed and becomes the 3rd paragraph.
- Rule 23, Section d, present 3rd paragraph becomes the 4th.
- Rule 23, Section d, fourth paragraph has been changed and becomes the fifth.
- Rule 23, Section d, the 5th, 6th and 7th paragraphs become, respectively, the 6th, 7th and 8th paragraphs.
- Rule 23, Section e, first paragraph.
- Rule 23, Section e, second paragraph.
- Rule 23, Section f, stricken out.
- Rule 24, Section a, first paragraph.
- Rule 24, Section a, second paragraph.
- Rule 24, Section a, fourth paragraph.
- Rule 24, Section a, a new (fifth) paragraph.
- Rule 24, Section a, the present fifth paragraph becomes the sixth.
- Rule 24, Section a, the present sixth paragraph has been stricken out.
- Rule 25, now has a fine print note under the heading.
- Rule 25, Section a, now has a heading.
- Rule 25, Section a, each of the three paragraphs have been changed.
- Rule 25, Section b, now has a heading.
- Rule 25, Section b, section "c" becomes No. 2 of "b".
- Rule 25, Section b, has a new paragraph under No. 2.



This Practical Demonstration is the Window Trim of the Gainaday Electric Company, Minneapolis, Minnesota

Rule 25, Section b, section "d" becomes No. 3 of "b".  
Rule No. 25, Section c, now has a heading.

Rule 25, Section c, Section e has been changed and becomes No. 1 of "c".

Rule 25, Section c, a new (second) paragraph.

Rule 25, Section c, two new paragraphs under No. 2.

Rule 25, Section c, a new paragraph under No. 3.

Rule 25, Section e, second paragraph.

Rule 26, Potential rating has been increased.

Rule 26, Note under heading has been reworded.

Rule 26, Section a, first paragraph.

Rule 26, Section e, has been divided into two paragraphs.

Rule 26, Section e, 3rd paragraph has been changed and becomes the 4th.

Rule 26, Section g.

Rule 26, Section h, the table in the first paragraph.

Rule 26, Section k.

Rule 26, Section n, first paragraph.

Rule 26, Section n, two new paragraphs (3rd and 4th).

Rule 26, Section q.

Rule 27, Section b, first paragraph.

Rule 27, Section b, a new (6th) paragraph.

Rule 27, Section c.

Rule 28, Section b, a new (4th) paragraph.

Rule 28, Section d, first paragraph.

Rule 28, Section f.

Rule 28, Section i, the tables, there now being four tables, with notes.

Rule 29, Section e.

Rule 30, Section a, No. 2 in the fourth paragraph.

Rule 30, Section a, No. 3, in the fourth paragraph.

Rule 30, Section a, No. 4 stricken out.

Rule 32, Section a, second paragraph.

Rule 34, Section a.

Rule 35, Section a, stricken out.

Rule 35, Section b, has been reworded and becomes Section a.

Rule 35, Section c, has been reworded and becomes Section b.

Rule 35, Section d, has been reworded and becomes Section c.

Rule 35A, This is a new rule, having two paragraphs, for "Equipments in Extra Hazardous Locations."

Rule 36, Section b, has been reworded.

Rule 37A, Section a, second paragraph.

Rule 38, Section c, No. 1.

Rule 38A, Section e, Heading has been reworded.

Rule 38A, Section e, Has a new note under the heading.

Rule 38A, Section e, No. 1.

Rule 38A, Section e, No. 2.

Rule 38A, Section e, No. 8, a new paragraph.

Rule 38A, Section e, a new paragraph, No. 9.

Rule 38A, Section f, heading has been reworded.

Rule 38A, Section f, has a new note under the heading.

Rule 39, Section i, has been reworded.

Rule 41, Section a, has a heading.

Rule 41, Section a, first paragraph.

Rule 41, Section a, second paragraph.

Rule 41, Section b, has a heading.

Rule 41, Section b, has four new paragraphs.

Rule 41, Section c, reworded.

Rule 41, Section d, reworded.

Rule 41, Section e, reworded.

Rule 41, Section f, reworded.

Rule 41, Section h, reworded and now has ten paragraphs.

Rule 41, Section i, reworded.

Rule 41, Section j, a new Section.

Rule 42, Section c, two new paragraphs.

Rule 43A, This is a new rule for "Elevator Wiring Wiring."

Rule 43B, This is a new Rule for "Isolated Light and Power Equipments for less than 50 volts."

Rule 44, the potential rating has been changed to "600 to 5000 volts."

Rule 44, the heading has been reworded.

Rule 44, Section a, reworded and now has two paragraphs.

Rule 44, Section b, has been stricken out.

Rule 44, Section c, has been reworded.

Rule 45, now has a fine print note under heading.

Rule 45, Section a, has been reworded.

Rule 45, Section b, has been reworded.

Rule 45, Section c, has been reworded and now has five paragraphs.

Rule 45, Section d, this is a new section.

Rule 47, the potential rating has been changed.

Rule 47, the heading has been reworded.

Rule 48, this is a new rule for transformers.

Rule 50, Section a, Table under "Classification."

Rule 50, Section b, Table under "Insulation."

Rule 50, Section b, new fine print note under the table.

Rule 51, Section d, Table under "Coverings."

Rule 51, Section e, has been reworded.

Rule 51, Section f, has been reworded and now has four paragraphs.

Rule 53, now has the wording of old Rule No. 54.

Rule 54, a new Rule of five sections for "Varnished Cloth Insulated Wire."

Rule 68, Section c, the two paragraphs have been reworded.

Rule 69, Section b, Table under "Spacings."

Rule 69, Section b, fine print notes under table for "spacing."

Rule 70, Section c, a new paragraph.

Rule 70, Section d, No. 2.

Rule 71, Section b, reworded.

Rule 72, Section a, stricken out.

Rule 77, Section a, a new (8th) paragraph.

Rule 79, second fine print note under the heading.

Rule 85, in note under the heading there is a slight change.

Rule 85, Section a, second paragraph.

Rule 85, Section a, third paragraph. This is new.

Rule 85, Section a, fourth paragraph. This is new.

Rule 85, Section a, fifth paragraph. This is new.

Rule 85, Section b, now has a heading.

Rule 85, Section b, fine print note now becomes a rule.

Rule 85, Section b, a new (3rd) paragraph.

Rule 85, Section c, has an entirely new section.

Rule 85, Section d, stricken out.

Rule 85, Section e, is a new section.

Rule 85, Section f, the heading has been stricken out.

Rule 85, Section f, is new.

Rule 85, Section g, is new and has seven paragraphs.

Rule 85, Section h, is new and has six paragraphs.

Rule 85, Section i, has a heading.

Rule 85, Section i, is new and has two paragraphs.

Rule 85, Section j, the heading has been stricken out.

Rule 85, Section j, is new and has three paragraphs.

Rule 85, Section k, is new.

Rule 85, Section l, has been stricken out.

Rule 85, Section m, has been stricken out.

Rule 85, Section n, has been stricken out.

Rule 85, Section o, has been stricken out.

Rule 85, Section p, has been stricken out.

Rule 86, Slight change in the title of rule.

Rule 86, Slight change in the note under heading.

Rule 86, Slight change in note in italics.

Rule 86, Section a, has been reworded.

Rule 86, Section b, has been reworded.

Rule 86, Section c, has been reworded.

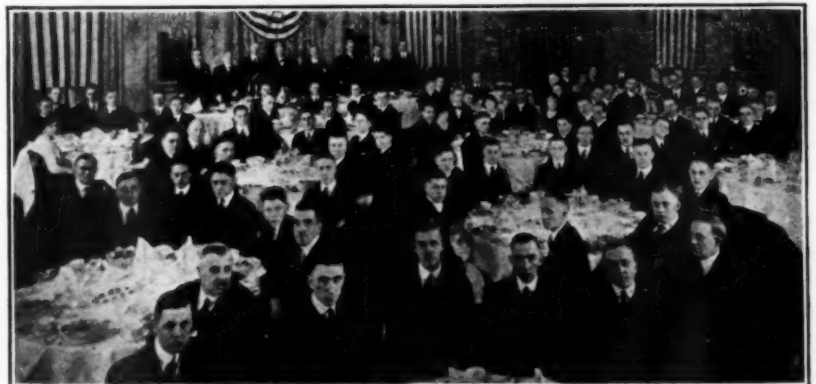
Rule 86, Section d, has been reworded.

Rule 86, Section e, has been reworded.

Rule 86, Section f, has been reworded.

## A Real Name

Many of our readers use ILG ventilating apparatus, but few know the meaning of those three letters. Some think it is an abbreviation and others have guessed that it is a coined word. It is the name of the inventor, Robert A. Ilg, who is treasurer and general manager of the Chicago Company which bears his name.



Institutional get together dinner of employees of J. F. Buchanan & Co., at Hotel Adelphia in Philadelphia, November 4, 1920. Mr. Buchanan was recently elected to membership in the National Executive Committee, N. A. E. C. D.

# Buffalo Extends Warm Welcome for 1921 Convention

BY WILLIAM N. KESSEL

Commissioner of Chamber of Commerce Convention Bureau Sets Forth Advantages of Convening in Queen City For Twenty-first Annual Meeting

Buffalo feels that it is highly honored by its selection as the convention city of the National Association of Electrical Contractors and Dealers for its annual meeting in July, 1921. We are proud of our city and are happy to welcome the electrical men to it.

Members will find comfortable hotel accommodations awaiting them, of which the city is justly proud, because they are equal to the best in the world in appointments and service. Both European and American plans are represented and visitors have a wide choice in rooms and locations; comfort at little cost, and luxury at modest prices. Rates for rooms are fixed and never are increased because of the presence of a convention in the city. Among the more prominent hotels are the Statler, Iroquois, Lafayette, Genesee, Broeze and Touraine.

This convention is only one of the nearly 150 important meetings which are to be held in Buffalo during 1921. This city's convenient location, unexcelled facilities and attractions have made it one of the great convention cities of the United States. Buffalo is accessible to more than half the people of the United States and Canada in twelve hours or less. For this travel there are available the fastest and best equipped trains of the great trunk lines, no less than fifteen railway systems entering the city, and in summer the added facilities of ten steamship lines, which bring many thousands of convention visitors and tourists to Buffalo. Because of this ease of access, it is a common experience of national associations meeting in Buffalo to find their usual attendance at their annual meetings greatly increased.

## *Called Electric City*

Buffalo, sometimes called the Queen City of the Lakes, but more often the Electric City, is now a place of more than 500,000 people, the 1920 Federal Census having given it a population of 506,775. Situated at the foot of Lake Erie and lying along side of the lake and the Niagara River, Buffalo's situation is ideal geographically and it is destined to become one of the greatest

industrial centers of the country. To this point the grain grown in the great Middlewest and Northwest of the United States and the wheat producing areas of Canada is brought and stored in 23 elevators with a capacity of 28,250,000 bushels and here are assembled such materials as iron ore from the Lake Superior region, coal from Pennsylvania and other neighboring states, limestone for fluxing, gas from neighboring fields and hydro-electric power from Niagara Falls, and all these elements are employed in the manufacture of iron and steel, copper and brass, flour and flour mill products to be distributed by lake and rail and the new New York State Barge Canal to various parts of the United States and to the Seaboard for export. It has three thousand industrial establishments, fifteen railways and a number of steamship lines.

Buffalo has the largest single linseed oil crushing plant in the world and as a result of this, Buffalo manufactures great quantities of paints, varnishes and oils. It is the home of the Pierce-Arrow automobile and the Pierce-Arrow truck. The Dunlop Tire Company of England has selected the Queen City as the place for its American plant and approximately 20 buildings have been erected during the past few months as part of an investment of \$25,000,000 to be made on the River Road just outside of Buffalo city limits where pneumatic tires will be manufactured. The location of this plant was decided only after the English company representatives had traveled fourteen thousand miles throughout the United States and made studies of every possible location. Buffalo's 15 trunk lines of railroads and many steamship lines, the fact that it is the western terminus of the New York State Barge Canal and that it is known as a city of beautiful homes, splendid public schools, parks and playgrounds and far advanced in caring for the social welfare of its inhabitants were all factors in bringing about the determination of Buffalo as the best location in the United States for the plant.

Buffalo, while generally regarded as an inland city, is in reality one of the

great ports of the world and its total water tonnage annually during recent years has averaged between fifteen million and twenty million tons. Its total grain receipts average nearly a quarter of a billion bushels. The port of Buffalo is also a great lumber market.

## *Educational Centre*

Today Buffalo has 75 public schools and 80 private and parochial schools, with a total attendance well beyond 100,000 pupils. Within the last few years four new high schools have been completed in this city and the total number of such schools now is five. In addition, there is the State Normal School, one of the finest institutions of its kind in the Empire State. There is also the University of Buffalo, Canisius College and D'Youville College, the latter for women. Canisius College and the University of Buffalo are both to be greatly enlarged this year, land having been secured and arrangements being made for the gradual erection of new buildings greatly to extend the scope of their activities. Two campaigns conducted in October of this year have raised more than five million dollars for University of Buffalo and more than one million dollars for Canisius College. The latter college will have courses in electrical engineering in addition to civil, chemical and mechanical engineering.

In summer, Buffalo is a paradise for the automobilist. Buffalo leads in asphalt paved streets, and in addition, there are many miles of beautifully macadamized parkways, connecting a splendid system of public parks. In Delaware Park, the largest of the city's recreation grounds, are located the Albright Art Gallery, one of the finest examples of Grecian architecture in America, the white marble buildings of the Historical Society, a Zoo, a Casino, greenhouses and other buildings. Provision is made in Buffalo's parks for the lovers of outdoor sports, including baseball, golf, lawn tennis and lawn bowling.

At the Front is a splendid view of lake and river, and in the distance suggestions of Buffalo's greatness as a



commercial and manufacturing city. Many children find delight in the wading pool at Humboldt Park. An unsurpassed collection of rare plants and flowers is housed in the great Botanical Garden in South Park. In each of the larger parks, there is a band pavilion and free daily concerts are given by the Park Band.

Many millions of dollars have been spent by New York State in the improvement of highways, and Erie County, in which Buffalo is located, has co-operated and contributed liberally for the creation of good roads in this section, with the result that brick and macadam roadways radiate in all directions far into the country and to the East across the state. One of these improved roadways connects Buffalo with Niagara Falls, practically a suburb of this city, and an objective point for thousands of tourists who never tire of witnessing the majesty and grandeur of the cataracts and the wonderful gorge and rapids below. Niagara Falls also is accessible from Buffalo by train or trolley with frequent and rapid service.

#### *Social Needs Considered*

While advancing their material interests, the people of Buffalo and city officials always have considered the social needs of the community, and this city always has been among the leaders in this service. The first organized charity work in America was begun by the Buffalo Charity Organization Society, which still exists. Buffalo is amply provided with public and private hos-

pitals, and in the past few years has co-operated in the war against the white plague. The city has built and maintains at Perrysburg, in the hills to the southwest of the city, a splendid hospital for the treatment and care of both adults and children suffering from incipient tuberculosis. Contracts have been let for a million dollar hospital for those in advanced stages of this scourge.

Altogether, there are more than one hundred agencies and institution in Buffalo for the care, treatment and maintenance of the unfortunate and misguided. These matters have received the careful attention of the Chamber of Commerce, and through the activities of its Charities Bureau, fake solicitors have been practically driven out of town and much waste prevented.

With her growing iron and steel industries, and hundreds of other stable and established manufacturing plants, Buffalo afford steady and remunerative employment to a great army of working men, and at the same time, every facility for a most comfortable living. It is not a city of tenements, the few existing being vigorously regulated, and many hundreds of the city's workmen are comfortably housed in their own cottages, most of them electrically lighted and equipped with an abundance of air and light, and usually a lawn and garden.

Since the beginning of the present century, the system of instruction in the public schools of this city has been extended to include training in arts and crafts, so that the children are no longer

taught solely to become clerks or bookkeeper, but if they wish, they have the opportunity of learning the fundamental principles of a number of valuable trades. Electrical work is taught to large numbers of boys in grammar and high schools as well as in the Technical High School and the evening schools. Nor have the girls been overlooked in this improved training, and they are taught cooking, sewing and domestic science.

Aside from all of her material advantages, natural and acquired, Buffalo regards as her greatest asset the loyalty and enthusiasm of her citizens, who are notably liberal in their views of public policy. This spirit is demonstrated in the growing membership of the Chamber of Commerce, embracing the leading manufacturers, business and professional men of the city, alert on every question of public importance and efficient in advancing everything which means improvement to the city.

#### **Executive Committee Election**

The results of the election of eight members of the Executive Committee of the National Association of Electrical Contractors and Dealers were announced on Nov. 16, as follows:

Atlantic Division: Paul H. Jaehnig, Newark, N. J.; Geo. M. Chapman, Waterbury, Conn.; J. F. Buchanan, Philadelphia, Pa. Central Division: Robley S. Stearnes, New Orleans, La.; A. L. Abbott, St. Paul, Minn.; A. Penn Denton, Kansas City, Mo. Pacific Division: Hugh Kimball, Oakland, Calif. Canadian Division: C. H. E. Williams, Vancouver, B. C.

T. M. Templeton, Detroit, Mich., was appointed by the National Chairman as Committeeman at Large to fill the vacancy caused by the resignation of A. L. Oppenheimer, Cleveland, Ohio.

The newly elected members will take office on the first of January, 1921, and shall hold their offices for a period of two years.

The result of the balloting demonstrated the interest taken in the new method of election by the large number of ballots cast and by the further fact that there were so few defective ballots in spite of this being the first year that mail elections have taken place.

The next meeting of the Executive Committee was fixed by the National Chairman for January 24, 1921, and is to be held in the offices of the Association.



Old Canal Boats in Ohio Basin, Buffalo, N. Y., Now Being Improved



# • CONTRACTING •

A Department Devoted to the Study and Discussion of the Practical Problems of Electrical Contracting

ALLAN COGGESHALL Associate Editors HENRY F. RICHARDSON



## Switch Boards—Continued.

Before leaving the subject of switch boards there are several points which may be worth discussion.

In an alternating current system where bus bars are to carry any considerable amount of current, say 1000 amperes or more at 25 cycles, the question of "skin effect" must be considered. Skin effect is the tendency of an alternating current in any conductor to distribute unequally across the cross section of the conductor. This tendency is for less current to travel through the portion of the conductor near the center with the density increasing toward the outer surface of the conductor. This has the result of decreasing the effective area of the conductor as the section which carries little or no current might as well be of a non-conducting material or the conductor might as well have a hollow center.

Skin effect is greater with large conductors, as would be required to carry heavy currents, and is also greater with greater frequency. With conductors less than 500,000 C. M. at 60 cycles or 1,000,000 C. M. at 25 cycles, skin effect is of no importance, except in long feeders, where drop is an important factor.

For larger sizes or higher frequencies, however, the size of the conductor should be increased or conductor should be made up about a hemp or other non-conducting center. Formula or tables for calculating the additional cross section necessary are given in most hand books.

Skin effect is substantially the same in a solid or stranded conductor. Where one leg of a circuit consists of a number of cables the entire group act as one. Therefore if, for instance, there are four cables to each leg of a circuit, if these are arranged two by two, that is corresponding to the four corners of a square, and are separated a short distance from each other the effect is the same as in a single cable made up with a hemp core.

In a switch board, therefore, skin ef-

fect may be reduced to a minimum by arranging bus bars carrying heavy currents in the form of a hollow square instead of side by side.

It is often very difficult to find room for a large switch board in an engine room, or possibly the only available location may be on the opposite side of the engine room from the route of the feeders. In such cases the use of a remote control type of switch board may be desirable. The generator circuit breakers may be made solenoid or motor operated type and may then be located on small panels close to each generator. The main switch board need then only consist of the necessary instruments and contact making devices for operating the solenoid or motor operated circuit breakers.

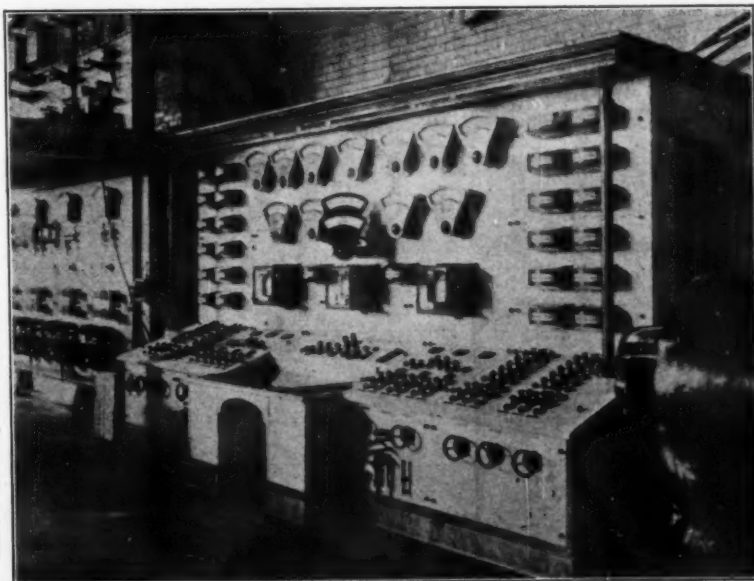
This board will be of small size and may be located at any point from which the machines can be seen as the main busses pass directly under or over the panels at the generators and only small wiring is carried to the control board.

Such a board is often located on a small gallery built for the purpose and

may even be located outside of the engine room as the operation of the switches is indicated by lights on the control board. The feeder switch board may of course be located outside of the engine room.

While the use of remote control may often save considerable money due to shortening and simplifying the generator connections, it will seldom be justified by cost alone, except in a large central station, as the remote control apparatus is expensive. However, in many cases the advantages will offset the additional cost.

Remote controlled circuit breakers may of course be used on feeder circuits as well as for generators. For instance, in the case of a large group of office buildings it was desired to control all feeders from the main switch board. This would have required a board over 80 feet in length and for which there was no space available in the engine room. In this case remote control breakers were installed in all feeder connections and these were located at a considerable distance from



Showing Dead Front Control Board for Operating Contactor Feeder Switches and Generator Switches Shown in Other Illustrations

the engine room and at a location which considerably shortened the feeder runs.

The control board which was installed in the engine room and which controlled all the generators and feeders was very small. As a matter of fact this board also controlled two additional generators located in a new engine room located about one hundred feet away from the engine room in which the switch board was installed.

The use of remote control apparatus may sometimes be justified where a switch or circuit breaker would be of such size that it would be difficult to operate by hand. A large skife switch, especially of the multipole type, is very hard to operate. This is even more so where a switch is infrequently operated and may become slightly corroded.

For instance, in a large office building with alternating current service an electrician came in contact with the main bars in such a way that he could not release himself. It took some time to pry the main switch open to release this man. This switch was then changed to remote control type.

#### Stage Switch Boards

The laws of many cities require that stage switch board in theaters be dead front type. The use of a dead front board is probably justified even where not required by law as a stage board is generally located where it is accessible to those not accustomed to the use of a switch board, and also where a live front board is very likely to be a fire hazard.

The stage switch board usually controls all the lights in connection with the stage and often the main auditorium lights as well. Most of these circuits

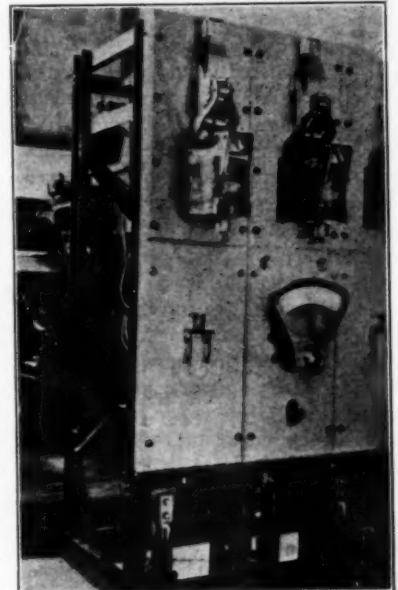
are equipped with dimmers. Usually the stage switch board combines the function of panel board as well. The branch circuits from the various foot lights, border lights, etc., are concentrated at a section of the board known as the "magazine," although this may be an entirely separate panel board located near the main board.

The magazine is divided into a large number of sections, as each color of light in foots and on each border, etc., must be controlled separately. The magazine usually consists of fuses only as there is no need of switches. Dimmers are usually connected in the mains between each section of magazine and the main switch on switch board controlling the section.

Dimmers are usually arranged in banks and are often mechanically interlinked so that by operating a clutch a number of dimmers may be operated by a master lever. This may be desirable at times when for instance all red lights in foots, borders, etc., are to be dimmed or brightened together. The bank or banks of dimmers may be grouped at one side of the switch board or may be above or below the board or may be located below the stage and operated by extension rods.

Remote control type dimmers are often used where the dimmer is motor operated and is controlled by two contact makers which may be located on the switch board close to the corresponding main switch. The entire board is sometimes made remote control type in which case the entire board and dimmer may be located below the stage or at some other convenient point, the control panel only being located on the stage.

While the use of an elaborate switch board may be justified in the case of a large theatre or opera house, in many theatres the money spent for a complicated and elaborate stage switch board is largely wasted. A complicated switch board often runs into considerable money and therefore presents an opportunity for economy to the contractor. In many of the smaller theatres dimmers are seldom used except for the house lights but are often provided in

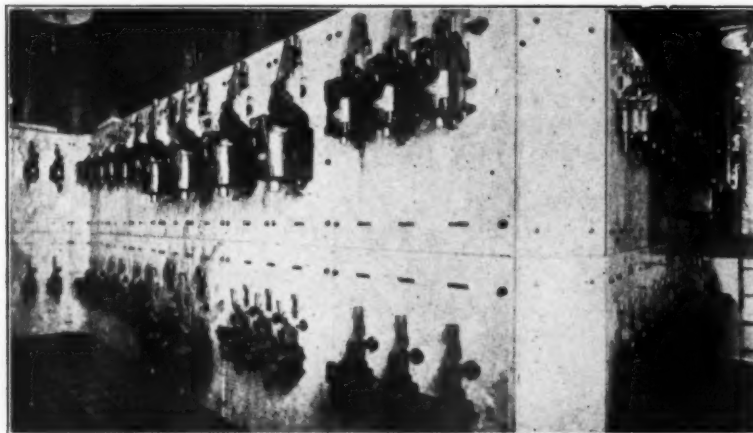


Remote Controlled Circuit Breaker Switches for Generator Operated From Control Board Shown in Other Illustration

all circuits on account of the possibility that it may be necessary at some time to dim any circuit.

Considerable money may be saved in such a case by providing a few dimmers only and by arranging these so that they may be connected in any desired circuit. This may be done very simply by terminating each circuit with a short length of re-enforced cord and an insertion plug of proper capacity.

Receptacles connected to the source of supply may then be provided into which these plugs may be inserted. Several of these receptacles may have dimmers in series, the remainder being connected direct to the supply, of course through fuses. In this way any circuit may be either connected directly to the line or may be connected through a dimmer if desired. The use of switches may even be dispensed with in such a board, as any circuit may be broken simply by pulling out the plug. Bryan "DD" and Metropolitan "heavy duty"



Remote Controlled Circuit Breaker Switches for Main Feeders Operated From Control Board Shown in Other Illustration



plugs and receptacles have been found to be very satisfactory for this service, the latter having a capacity of 30 amperes at 120 volts. Wall type stage pockets may be used for greater capacity. A board of this type is of course dead front and costs only a fraction of the cost of the usual "stage switch board."

#### Panel Boards

A recent development in panel board design which reduces the cost and size is the use of single pole branch circuit switches. Where the neutral of a three wire system or one of the outside wires in a two wire system is grounded there is no advantage in the use of a switch in the grounded side. An obvious saving may be made in the usual type of panel with two pole knife switches by simply omitting the switch blades in the neutral or grounded connections.

However, a much greater saving may be made and the size of the panel reduced by installing the neutral fuses as a separate section of the panel, but on the same slab. With this arrangement adjacent switches in the switch section are of the same polarity so that the spacing may be reduced. The neutral fuses may be grouped closely together along a single bus which may be installed horizontally across near the top or bottom of the slab, using only a few inches in height and without increasing the width of the slab. A precaution which must be observed, however, is that a substantial switch must be used, as while a flimsy two pole switch is bad, a flimsy single pole switch is far worse.

The use of dead front panel boards as well as dead front switch boards may be carried to extremes. As far as mechanical construction is concerned, the best of the dead front type of branch circuit switches is obviously not equal to a simple, well constructed knife switch. The springs and insulation, etc., of the dead front switch, are just that many more chances for trouble. Dead front switches usually cost considerably more than knife switches.

The use of dead front panel boards would seem to be justified only where the safety feature is important. For instance, in a department store or in an auditorium where there is no necessity for local push button switches and the lights are to be controlled from the panel board, dead front panel boards are desirable. The switches in such panels will undoubtedly be operated by

employees unaccustomed to electrical apparatus. The switch section should have a separate door from the fuse section so that only an authorized person may have access to the fuse section. Dead front panel boards are also desirable in residences.

However, dead front panel boards are often used where all lights are controlled by local switches. In such cases the only function of the branch circuit switch is to disconnect a circuit to replace a fuse or possibly to change a fixture or switch or to make extensions to the circuit.

The man who can do this work should certainly be able to open a knife switch without danger. As a matter of fact the only danger to an experienced man on a 120 volt circuit would be in the use of metal tools near the live parts. A shock at 120 volts or even 240 volts might seriously injure an inexperienced person, but would not cause even a second thought on the part of an experienced electrician.

Such panels are often furnished with N. E. C. fuses. It does not seem consistent to provide a safety switch merely to disconnect the circuit and then leave the electrician to replace a N. E. C. fuse as he is very likely to come in contact with the fuses of adjacent circuits in doing so.

Where such a panel is used, for the sake of consistency the fuses should be

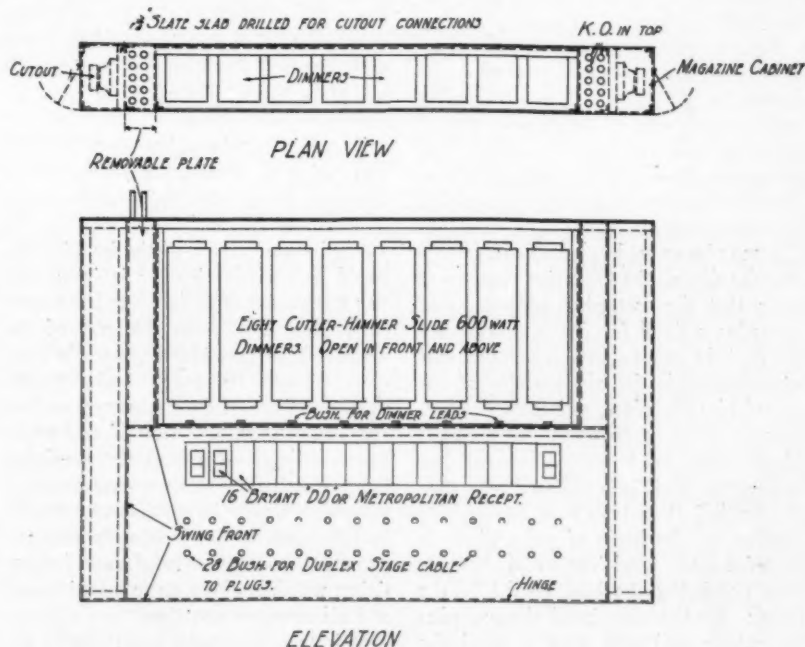
plug type. While the plug type fuse receptacle introduces more contacts and small parts into a circuit than the N. E. C. type, it is probably no worse than the safety switches themselves. Of course this argument does not apply to cases where the safety switches are provided, because they are to be operated by inexperienced persons, where it is perfectly consistent to use N. E. C. fuses in a separate compartment.

(To be continued.)

#### Home Lighting

"Lighting the Home" by M. Luckiesh, is a pioneer book, published by the Century Co., New York. It ranks with books on interior decoration and furniture as a help toward transforming a house into a home. It opens up possibilities in this direction and is practical in every suggestion on all sorts of difficult lighting problems.

The author is internationally known as an expert on illumination. He is connected with the General Electric Company research laboratory, and his discoveries of lighting principles and their application to everyday conditions have been developed along strictly scientific lines. In the present book his ideas are further explained by line-drawings that illustrate clearly the means by which ideal home lighting may be obtained at comparatively slight cost.



JACK TYPE-STAGE SWITCHBOARD

# Improving Estimating Methods; Why and How--I:

BY ARTHUR L. ABBOTT

First of a Series of Articles Prepared by Mr. Abbott of the Electrical Construction Co., St. Paul, Minn., and also a Member of the National Association's Cost Data Committee

In the October issue of the Contractor-Dealer our editor makes this statement: "The secret of the success of any business is in knowing the exact cost of everything which is disposed of by that business."

The admonition "Know your costs" has been the text of a large percentage of the business sermons preached within the last ten years. Applied to a vacuum cleaner, the term "Cost" means a fixed, definite and known sum of money paid for the cleaner laid down at the dealer's place of business, plus overhead. Applied to a flat price contract, cost includes overhead and a more or less variable, indefinite and unknown sum of money to be paid for labor and material. As the cost of labor and material makes up from 75% to 85% of the total cost of the job, this item, or the prime cost, is relatively of much greater importance than the overhead; and as the prime cost must be arrived at by means of an estimate, the process of estimating is clearly one of the most important operations carried on in the contractor's office.

The methods employed in making estimates therefore demand critical examination to determine their reliability and the accuracy of the results, and if these methods are found wanting, common sense would dictate such investigations as may be necessary to establish the right method.

It may be argued by some contractors that the day of the flat price contract is past; that the cost plus percentage or cost plus a fixed fee forms of contract are rapidly coming into favor and will soon supercede the old practice of flat price bids; therefore, estimates will seldom or never be required and methods of estimating are becoming less and less important. This idea is based on a partial truth. It is true that competitive bidding on the basis of price alone is wasteful and inefficient, and usually does not bring the best results to the owner. On the other hand, the cost plus percentage and cost plus a fixed fee forms of contract fall short of the ideal in one very important respect—there is

practically no incentive for the contractor to handle the work efficiently; in fact, either of these forms of contract puts a premium on inefficiency. This lack of incentive is felt clear through the entire organization, including the workmen. The ideal contract must provide an incentive which is sufficient to bring forth the contractor's best efforts. This incentive must be some form of premium to be paid to the contractor for reducing the actual cost of the job below an estimated or standard cost.

In the case of the job on which work must be started and perhaps half completed before complete plans and specifications can be made, the incentive form of contract is still possible. An estimated cost of labor can be arrived at after completion of the job; or a monthly check can be made of actual work done, and labor costs compared with estimated or standard labor costs.

For the reasons outlined, it is the writer's prediction that the increasing proportion of non-competitive business, instead of tending to eliminate estimating, will eventually bring about the development of estimating methods to a high degree of refinement, which will make the estimating of labor costs almost an exact science.

There is not in existence today any such thing as a scientific system of estimating labor costs on electrical construction work; at least, if any system which by any stretch of the imagination could be called scientific is in use by any contractor, that fact has been carefully concealed from the rest of the world. This fact is not generally realized, because in many instances the chief executive of the company has done very little estimating himself and really knows little about it; and the men doing the estimating are not working in an atmosphere which is conducive to original thought, or are lacking in that imagination and healthful form of skepticism which lead a man to question any and all accepted practice.

It is true that quite good results are being obtained by the use of present methods, by experienced estimators; not

so good as most of them will claim, for two reasons. First, on the majority of jobs there are so many extras and changes that at the end no one knows what the estimated cost was, unless each change has been carefully estimated and the original estimate corrected accordingly. Second, it is very seldom that any check is made of actual labor costs against estimated costs except as to total labor on the entire job; hence it may easily be that a loss on one item is balanced by a saving on some other item, the total indicating a correct estimate while on certain individual items the estimated costs were far from the actual figures.

However, the principal reason why a better system is needed lies in the fact that the methods in common use today are based 10% on actual data and 90% on the estimator's judgment, whereas the ratio should be reversed. Granting that the experienced estimator with the large company is able to produce satisfactory results, when he leaves the concern his experience is lost to them; his place must be filled; this means eventually that a new man must learn the game by the slow and expensive process of acquiring experience.

And what about the small contractor who is gradually entering the field of the larger class of work? Purely selfish motives, without regard to other considerations, dictate to the larger concerns that they must educate the small man and help to make him a better business man. One of his weakest points is inability to make accurate estimates. In order to educate him in estimating, we must provide him with a real estimating system.

The problem before us then is to produce a system of estimating labor costs based upon accurate data, which will enable us to arrive at a figure to apply to each item on any specific job by means of a fixed and definite process, and which will as far as possible eliminate the factor of judgment.

Considering the labor cost on any one specific item on a certain specific job, this cost may be resolved into two

factors; a fundamental or base cost, and a factor covering all conditions which operate to increase this base cost. (In this discussion the term "cost" is to be understood as meaning time. Results would in all cases be in terms of hours and minutes to be reduced to dollars and cents by a factor fixed by local conditions.) Leaving the base cost for later consideration, a primary analysis of the conditions affecting the cost on the specific job gives three classes as follows:

*A. The efficiency of the workmen.*

*B. Conditions on the job under the control of the contractor.*

*C. Conditions on the job over which the contractor has no control.*

**A. Efficiency of the Workmen.**—The efficiency of individual workmen will vary within wide limits, but the efficiency of a crew will come reasonably close to an average figure. The base cost will indicate time required at 100% efficiency, so called, and a factor can be determined to cover the increase over the base cost due to the attainment by the men of average efficiency only, instead of maximum. This increase will be in the neighborhood of 50%. It is true that a much higher efficiency than the average can be maintained by a picked crew, but it is not usually safe to base an estimate on the use of a picked crew.

**B. Controllable Conditions.** These include the supply of men, materials, tools, equipment and data; and the "organizing" of the job, or the general method employed in handling the work. A wide variation in labor costs may be caused by varying degrees of efficiency shown by the contractor in handling these items. For general use, the increased labor cost due to the contractor's shortcoming in handling work would be set at a figure which would cover fair average good practice. It is hardly conceivable that any man should deliberately plan to neglect his work and raise his estimated labor cost to cover such neglect.

On the other hand, there are a few contractors who by means of their complete plant and equipment and highly efficient methods of handling work are often able to reduce their labor costs below the average. Such concerns keep so close a check on their labor that they would very quickly be enabled to determine for themselves the percentage of

saving made possible by their improved methods.

**C. Uncontrollable Conditions.** Certain inherent features of the job—the size of the building and the nature of the electrical installation—also the rate of progress made by the general contractor and his general efficiency in handling the building construction—have a large bearing on the electrical contractor's labor cost. These are all conditions over which the contractor has no control. It would seem that all such conditions can be covered under three classes:

*A. Area of space available at one time for installing work.*

*B. Complexity of the installation.*

*C. Efficiency of the general contractor.*

In a succeeding issue a proposed method will be given for evaluating the effect on labor costs of each of these three items. This method has been in experimental use for sometime on a rather large scale. The base costs and their accurate determination will also be discussed.

(To be continued.)

## Movement to Standardize Voltages

Evidently the work of standardization is taking a firm hold on the electrical industry. The latest evidence to that effect is the campaign started by lamp interests to induce consumers to maintain a specified average of voltages. The advantages are economy of stock carried and less dissatisfaction by customers.

This movement of the lamp manufacturers has been endorsed by the National Electric Light Association and the Association of Edison Illuminating Companies, and should meet with the approval of all allied interests. The accomplishment of the plan will have a tendency to standardize voltages all around, which of course will be of vast benefit to the appliance branch of the industry. A bulletin on the subject is quoted as follows:

An active campaign will be started to induce consumers to maintain an average voltage of either 110, 115 or 120 volts, so that only lamps of these voltages need be supplied. This will enable us and our distributing agents to carry in stock only three different voltage lamps instead of nearly thirty now required.

Having a fewer number of voltages of lamps to manufacture and carry in stock, much better service and more prompt delivery can be made, and there will be no need for the substitution of lamps of voltages slightly different from that ordered on account of not having lamps in stock of the voltage requested.

Mazda lamps can be made for exactly the voltage desired, and for that reason the ideal condition would be if all circuits were adjusted to one voltage, namely, 115. This is a condition that we can hardly hope to realize for some time, but it would greatly simplify matters if there were a demand for only three instead of nearly thirty different voltages.

There are at present thirty-six standard lamps made for the thirty voltages between 100 and 130, thus making over a thousand individually different lamps regularly supplied. While there is but a slight demand for lamps of certain of these voltages, there are other lamps of considerable demand not listed in the standard schedules that bring the number of lamps regularly made to well over one thousand. By the adoption of standard voltages, this quantity would be reduced to about one hundred lamps, twenty of which represent about 80 percent of the total demand.

Those who are using odd voltage lamps should be induced to use the next lower standard voltage, as for example, supply 110 volt lamps where 112 volts have been used in the past. It can usually be shown by voltage surveys that the actual voltage on the lamps while burning will average less than supposed.

If, however, a survey shows that the average circuit voltage is an odd figure, the customer should be induced to raise his circuit voltage so that a standard voltage lamp can be used.

It is realized that there are several plants maintaining a voltage above 120. In many cases it will be found that the average voltage at their customers' sockets is not above 120, and in these cases 120 volt lamps can be used. Practically all others can use a 125 volt lamp, which can be supplied if necessary.

Those plants using such a voltage should investigate the merits of changing to 110 volts, which in the majority of cases can be done at slight expense by balancing one set of circuits against another to make a three-wire system, with 110 volts on each side.



# The Congress of the Building and Construction Industry

By SULLIVAN W. JONES

**A Brief Historical Sketch of the Movement, the Conditions Which Gave It Birth, and a Statement of Purpose, All Set Forth by its Secretary**

Men, especially in mass, are prone to act on impulse. Later, questions arise as to the wisdom of actions taken during the moment of impulse. At its Baltimore Convention the National Association, without discussion, appropriated \$250 as a contribution to the preliminary work of convening a Congress of the Building and Construction Industry. Doubtless many who voted yea on the resolution are now asking what is the Congress of the Building and Construction Industry. They are entitled to an answer.

During the war there was a vast amount of war and industrial construction which overtaxed the productive capacity of the building and construction industry. Following the armistice there was an unparalleled industrial expansion which toward the end of 1919 created in building a peak. But from the summer of 1917 to now there has been practically no construction to meet the normal increase in peace needs of the nation. Since the peak was reached in 1919 the building and construction industry has been sinking rapidly into a state of coma. Today it has practically ceased to function.

This condition, in the face of the rapidly multiplying shortage of structures for housing the people and for facilitating activities essential to life, has forced men everywhere to ask: "What is the matter with the building industry? What is the cause of its present paralysis?"

In a first feeble attempt to answer these questions a handful of men representing the functional elements of the industry met in conference at Atlantic City on August 6. From the discussion and diverse opinions expressed at this conference emerged the truth that the problem confronting the building and construction industry could be solved only by the whole industry after an exhaustive self examination and a courageous search for facts.

With this understanding, and after a formal citation of conditions which are referred to as chaotic and against public interest and national welfare, the conference resolved that a thorough

study be made of the relations of the various elements and industries which enter into building and construction activities; that a congress be convened to consider ways and means of eliminating the factors which have retarded necessary building and construction; and that a permanent congress be established to give continuity to the nationally beneficial objects which gave it birth.

The conference also appointed an Or-

ganizing Committee of representative men from all of the several functional elements of the industry. This Organizing Committee met in Chicago on September 27; affirmed the Atlantic City resolutions; designated the essential elements of the industry to be general contractors, sub-contractors, labor, architects, engineers, manufacturers of materials and equipment, dealers and investment bankers; created an Executive Committee of three representatives from each of these elements; gave the Executive Committee power; and adopted the following declaration as a statement of the purpose for which the congress is to be called:



Sullivan W. Jones

"To bring together in coöperation every element contributing towards or concerned in the building industry in a movement intended to promote the efficiency and improve the quality and extent of the service rendered for the public good by that industry, and to develop an understanding of interdependence within the building industry so that each part of the industry will work with every other part for the benefit of the nation."

The Executive Committee met in Pittsburgh on October 29, and reorganized itself into an Executive Board of forty, composed of five representatives from each of the designated elements of the industry, and appointed a committee to convene the congress on February 1, 1921, in Chicago. It also charged the Congress Committee with the task of preparing a program.

## Promotion of Efficiency

What the Congress will accomplish depends upon what those who participate in it wish it to accomplish. And what they wish in this respect depends upon their knowledge of the causes of present conditions, their attitude of mind and resultant motives and objects. Of these motives and objects there has been no clear exposition by the men who are responsible thus far for advancing the movement. Any attempt at this time, therefore, to go beyond the recorded resolutions and declaration in outlining the ultimate purposes or ends for which the permanent congress of the building and construction industry is to be created, is avowedly an attempt to prophecy, having some color of presumption.

As a matter of fact, there is no real necessity of indulging in prophecy and thus running the risk of stirring up dissension. There is no immediate need of agreement or ultimate aims. The future will take care of itself if the industry as a whole can be made to realize the importance of facts as compared with conjecture, and the importance of thinking on the basis of facts. "Until there be correct thought there can not be correct action; and when there is correct thought, right action will follow." Let us, then, accept, as an ade-

quate statement of ultimate purposes, the declaration adopted by the Chicago meeting. It commits the Congress to the promotion of efficiency in the industry, to improve the quality and extent of the industry's service, and to rendering that service for the public good.

But if the movement, snowball like, is to attach to itself supporters as it rolls forward and evolves, there must be a clear common understanding of immediate purpose or of the means to ultimate ends.

At the outset, in order to remove any possible misunderstanding, emphasis should be laid upon the fact that the congress is not another national organization. It is an institution. It is a deliberative body or forum, without mandatory powers. For its own enlightenment it may create and direct or employ research agencies. And to give its effort continuity it may set up executive machinery. There is no thought that the congress should usurp or infringe upon the prerogatives of or limit the autonomy of any existing organization.

The immediate purposes for which the congress is created are:

1. *To capitalize the power of association in creating and organizing good will in the promotion of common interests. Only through association are interests found to be common.*

2. *To propagate and give force to the elemental truth of the utter functional and, therefore, economic interdependence of those who contribute the work of their hands technical skill, materials and capital to building and construction.*

3. *Upon this truth and its acceptance to foster and develop a dynamic spirit of coöperation among all the functional elements of the industry. Such a spirit of coöperation is the indispensable preliminary to establishing that balanced, frictionless sequence of function which alone can increase efficiency and should be substituted for the existing competitive "law of the jungle" which breeds mutual suspicion, distrust, hostility, and results in waste.*

4. *To inaugurate and conduct a thorough scientific study of the relations of the various elements and industries which enter into building and construction activities.*

5. *To determine what are the elements in the industry which perform essential functions in the process of production, and to work for the elimination of all others.*

6. *To devise and propose a plan for coördinating and harmonizing the present unrelated and divergent policies of the organized elements in the industry.*

7. *To discover the road leading to the industry's economic independence, and to devise means for the industry to recover its right to control for its own use and for the benefit of the public which it serves, the technical and credit resources which it creates.*

If evidence is needed to fix in the collective mind of the industry the imperative necessity of a thorough going self examination, the conditions disclosed in New York City should furnish such evidence in conclusive form. The industry itself should have made the discovery and adopted corrective measures, instead of permitting the sore to fester until it burst upon the public through actions of grand juries and scare heads in an unintelligent, unsympathetic, sensational daily press. No matter who is responsible, no matter whether the charges made are justified or not, the incident is a blot upon the industry's record.

### Home Beautiful Exposition

The man who is planning to build a house and who likes to specify certain things that go into its construction, es-



Chester I. Campbell

pecially well known devices or fittings in the electrical lines, will find everything worth while laid out for his inspection at the "Home Beautiful" exposition to be held in Mechanics building, Boston, April 16 to 30, 1921. He will be well able, after the exposition to say what he wants, for in most cases he will see his ideas in practice in some

form, and will get additional ideas from the fittings of the model house, which will be a part of the exposition, and which will be complete in every detail.

Mechanics building is the finest structure in the country for exposition purposes, having the great or main hall and four other large halls. All these halls will be profusely decorated and with the beautiful displays, will make the most tasty exhibit ever seen in the country. The "Home Beautiful" exposition will be the first of its kind in this country and indications are that it will take its place among the leaders the first year.

The purpose of the exposition is educational, both as to efficiency in the home, which will be shown through the medium of the many appliances for time and labor saving, and the layouts of architecture and landscape, which will make for greater beauty inside and out of the home.

Chester I. Campbell, who has managed many of the larger expositions in Boston, is at the head of this Home Beautiful Exposition, which is an assurance of its success. Announcements in detail will be made in future issues.

### Industrial Notes

On Wednesday, Nov. 10, the Hygrade Lamp Co., Salem, Mass., held a visitors' day. Through the newspapers it invited the public to call and inspect its plant. About 300 people took advantage of the invitation and were shown how the Hygrade product is made.

In order to include information under one cover on C-H Products for mine applications, a new booklet has been prepared by The Cutler-Hammer Mfg. Co. of Milwaukee and New York. The new publication illustrates and describes manual and automatic motor controllers, accessory control devices, battery charging equipment for miners' lamps and for mine locomotives electric breakers, solenoiders, magnetic separators and clutches, electric air heaters, and soldering irons. Among the many interesting installation views shown are motor-driven mine pumps, hoists, and triple machinery, all controlled by C-H Controllers, and lamp batteries and locomotives being charged by C-H Charging Equipment. The cover of the booklet is in two colors, and shows a panoramic view of a mine tippie. The booklet is known as Publication 836.

# •RETAILING•

A Department Devoted to Practical Suggestions that Help to Solve the Problems of Electrical Dealers

## Advertising at State Fair

Bean Guessing Attracts Crowd and Company Acquires Big Mailing List

H. S. Lee, president of the Topeka Electric Company, writes that his company held a very successful demonstration of electrical devices in connection with the annual Kansas State Free Fair, at Topeka, Kansas, and encloses pictures of the booth and display, which the management of the Fair declared was the best and most attractive booth on the fair grounds.

The booth was decorated in black and white, which made a very striking contrast, and with the brilliant illumination and pleasing display, attracted the attention of every visitor. Reproductions of the booth are shown herein.

In order to get a mailing list of good prospects for electrical appliances they used the old familiar bean guessing contest. A fish jar was filled with beans and this placard hung on the corner of the booth:

HOW MANY BEANS IN THE JAR?

TWO VALUABLE PRIZES  
FOR THE NEAREST GUESSES  
REGISTER HERE

Cards about the size of a postal were



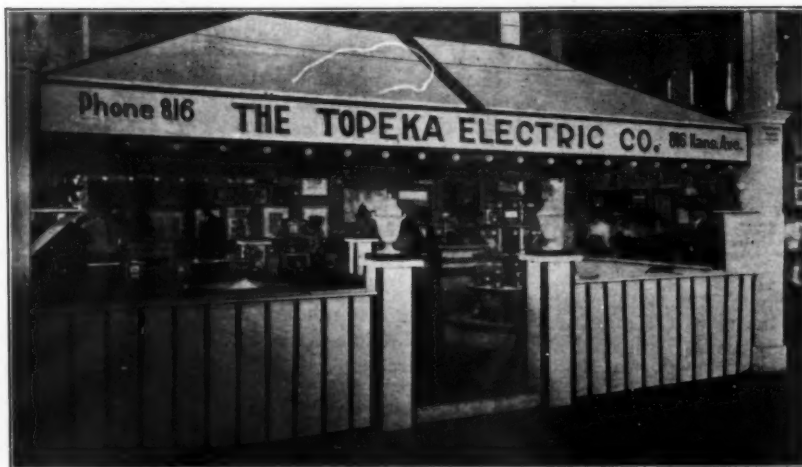
Interior of Booth of the Topeka Electric Company at Kansas Free Fair, Showing Revolving Display Stand

used to register the guesses, with very satisfactory results. Nearly 4,000 guesses were registered, ranging from 268 beans to sixty millions. The correct number was 7,340 and the winner was presented with an urn type percolator. An American Beauty Iron was awarded to the next nearest guess.

Mr. Lee says that the revolving display stand shown by the illustrations in the front and center of the booth, made an ideal method of displaying small ap-

pliances. He writes: "It is now operating in our store window and continuing to attract the attention of wary customers. The display stand and booth were erected by Mr. Berkeley, who has charge of our appliance department."

"We can heartily recommend this method of advertising, provided the electrical contractor-dealer spends a little money and effort in making his display attractive."



Booth of the Topeka Electric Company at Kansas Free Fair Held at Topeka Last September

## Unifying Sales Effort

By B. E. JOHNS

Store of C. S. Bisby Company of Providence, R. I., Good Example to Follow

The lighting system, furnishings, fixtures and general color scheme have a great deal to do with creating a store atmosphere that makes the spending of money in that store easy. These factors have been given careful consideration in the Providence, R. I., store of the C. S. Bisby Co. As one enters this store he feels none of the bareness, coldness, stiffness or aloofness that may be experienced in some stores.

There are no counters, shelves, or show cases in evidence. One can examine as carefully as he desires anything



that is on display. It seems more like entering the home of a friend than an electrical appliance store. After dark the store is illuminated with a soft pleasing light from bowls well up towards the ceiling, which is neatly and artistically paneled and painted a buff color. The upper part of the walls are white and reflect the light. The lower part is buff like the ceiling.

Small appliances and portable lamps are displayed upon small tables also painted buff, but with dark blue trimmings. That is the lower part of the legs and the knobs on the drawers are painted dark blue. Just enough blue is used to make the appearance of the tables pleasing. A dark blue cloth cover is also placed over the rectangular tops of the tables the long way. On each side of these covers several inches of the table top is left bare and the cover hangs down over the ends of the tables.

These covers serve to set off the nickled and polished appliances displayed upon them. They also look more serviceable when they are displayed upon tables than they do when safely stowed away in glass cases. A person can get a better idea of how they will look in the home. He or she can actually handle them.

The larger appliances such as washing machines, dish washers, ironing machines and vacuum cleaners are displayed on the floor but with a mat or rug on the floor to take away some of the store atmosphere and give more of the home atmosphere. In short the store throughout is given a very "homey" atmosphere. On the rug where the vacuum cleaners are displayed and demonstrated there is a little table with a blue cover and a portable lamp and beside it a chair in which the person watching the demonstration may sit. If there is more than one person watching the demonstration of course more than one chair may be placed beside the table.

This arrangement is in strict accordance with the principles of salesmanship as taught by the best schools. It is claimed that it is easier to make sales if the prospect is in a sitting position in a good light and the salesman is standing, or at least is in a position where he can look down into the face of the prospect. It is also of course necessary to have the prospect at his or her ease.

Sitting beside the little table with its cover and lamp makes the prospect feel more at ease. There seems to be a

moral support in the little table. The lamp makes it certain that the prospect will be in a good light. The salesman or demonstrator stands while showing the good features of the cleaner. The result is more sales than would otherwise be the case.

There is one peculiar thing about this store. It impresses one at once as a place of quality and good taste. There is absolutely nothing about it that appears cheap. In fact it has more of the quality appearance about it than many a store in which thousands of dollars have been spent for fixtures and fittings. Nevertheless the tables used are just ordinary kitchen tables. This store is a demonstration of the power of paint and cloth used with good taste to give the most commonplace material an air of distinction, for the interior of this store is most certainly distinctive.

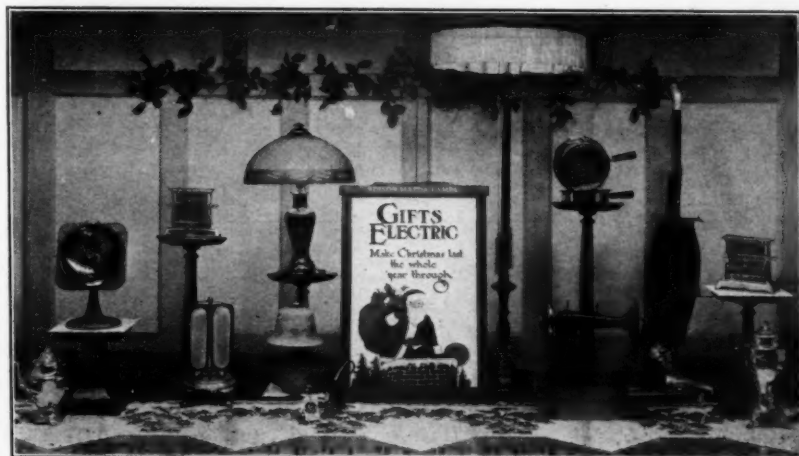
There is an advantage in this method of arranging displays not possessed by other methods. It is a very simple matter to give the store interior an entirely changed appearance at any time it is desired to do so. Saw off the corner of the table tops, paint them with a different combination of colors, have the covers dyed and the store appears as though all the old furniture had been replaced by new.

Only one of each thing is shown on the tables and these remain there. All orders are filled from original packages. The appliances are kept brightly polished and when they begin to appear shop worn are sold at a reduced price.

The windows in this store are small but the doorway is wide and fairly deep with double doors, only one of which is used. This makes it possible to use the doorway for display purposes. When

there are a large number of people passing the store a washing machine may be set outside where everyone can see it. If it is a cold morning a reflector heater with the current turned on may be placed there. When the heater is displayed in this manner it means more to the passing crowds than a window display. They not only can see the heater but also feel the heat. The sales appeal is at least double what it would be if the heat part was left to the imagination.

One of the greatest difficulties that many an appliance dealer experiences is securing and retaining the right kind of outside salesmen, and the profits of an appliance store depend in no small degree upon how effectively the outside salesmen work. In Providence these difficulties are even greater than they are in many other cities. For example, in some cities it is customary for a vacuum cleaner salesman to carry a cleaner with him and demonstrate it right in the home of the prospective customer. That can hardly be done successfully in Providence. Three different lighting currents are in use in that city. In the store, if it is down town, the current is probably 250 volts D. C. In the residential sections it is either 250 volts A. C. or 104 volts A. C. and there is no way of telling what it is before entering the house and looking at the lamps. One pole transformer may supply 104 volts while the very next one supplies 250 volts. Therefore if a salesman is going to carry any samples with him for the purpose of demonstrating them he must not only carry at least two of each kind, but he must make sure of his current before he attaches them to an outlet. Other-



Christmas Window Trim from the Edison Lamp Works

wise he is going to blow some fuses, burn out his appliances, or both.

Under these conditions it is necessary to depend upon photographs, fluent talking and persuading the prospect to visit the store to sell the goods. It is a case of giving the salesmen special training also. It is a case of going right out in the field with them teaching them how to make sales and showing them how to ascertain what current is being used in the house where the sale is made.

Every light user is not always sure of the current that he is using. This is especially the case if he has moved recently and hasn't tried out any of his old appliances on the new current. Every salesman is not enough of an electrician to make sure of the current or to know how to make sure of the current until he is taught.

Once instructed, once started on the right track, the length of time the man stays with the concern and the volume of sales that he makes depends to a very great extent upon how successfully his enthusiasm can be maintained. It is a case of pumping a little new enthusiasm into him every day. It is no different in the appliance business than it is in the life insurance, book, or any other specialty business. It is just as necessary to keep up the enthusiasm of the sales force as it is to hire men for it.

For these reasons the manager of the C. S. Bigsby Co. finds it necessary to devote a lot of time to keeping the "pep" in the sales force. A special room where the salesmen may be by

themselves is provided for them and every effort made to keep them thoroughly sold on their jobs.

## How to Dress a Lamp Window

By E. F. NEWKIRK

Authority on Window Trims from Edison Lamp Works Suggests Simple Arrangement

Here is an industrial lighting window display which every lighting company and electrical dealer who cares anything for the industrial lamp business in his territory, should copy.

To make such a display, first arrange a small table in the center of the window on which place some machinery—or a lathe or other interesting machine can be placed on the floor. White cardboard without gloss placed under the machine will emphasize the shadows more clearly. There is machinery of some kind in every town and the people owning it will gladly cooperate with dealers to carry out an idea of this kind.

Over the machine and in exactly the same relation to the machine, hang two R. L. M. dome reflectors. In one, place a 150 watt Bowl Enameled Mazda lamp, and in the other, place 150 watt clear Mazda lamp. Each lamp must bear the same relation to the machine, so that the lighting conditions are equal. Next connect these two lamps so that the control is from a three-way switch on the outside of the window glass.

The switch and sign, "Turn switch and note changes," are placed on a strip of wood extended from the frame-

work above the glass. Every electrical man knows how to make a connection that will meet his particular window condition.

A small sign on each reflector names the lamp contained in it and near each reflector is shown the type of lamp used in that reflector—these can be connected by ribbons to their respective reflectors without complicating the arrangement.

A 24-inch pedestal is used on each side of the machinery for building the lamps and lamp cartons in the arrangements shown.

## Repair Parts

Mr. Oppenheimer Believes Contractor-Dealer Should Have Better Service From Manufacturers

The following communication comes from A. L. Oppenheimer of the Enterprise Electrical Construction & Fixture Company, Cleveland, Ohio:

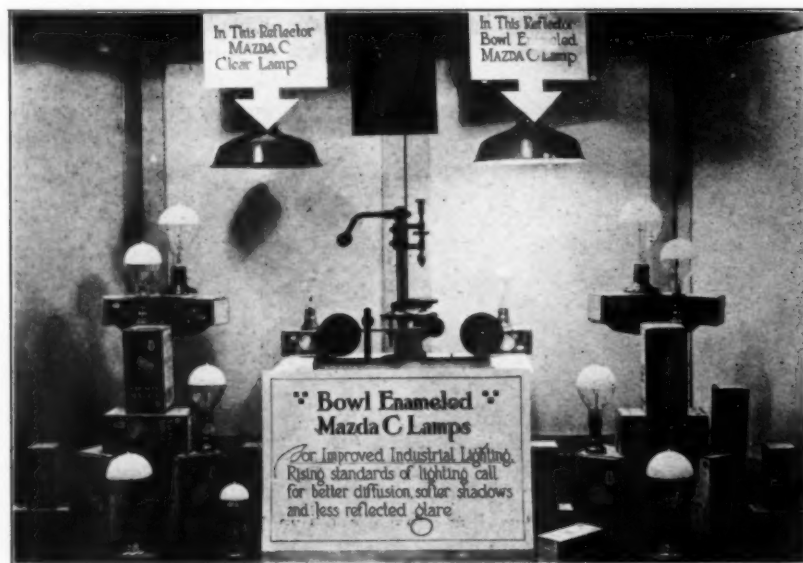
"Manufacturers of electrical appliances have not afforded proper support to the jobbers and contractor-dealers by prompt service in furnishing repair parts for their wares.

"Many times the latter are required to repair such articles as toasters or irons on almost immediate notice to satisfy a customer. Long delays that follow, sometimes many weeks, on the part of the manufacturer in furnishing the needed repairs certainly are a big hurt to the electrical appliance business.

"I don't like to complain. The electrical trade of all groups is getting together and working in closer cooperation than ever before, but here, I believe, is a serious matter that deserves immediate attention on the part of manufacturers if dealers and consumers are to be kept pleased.

"The dealer, unable to hold a stock of parts that may never be sold, brings down upon himself the ire of many a customer when he is unable to make immediate repairs. The central station bears a small loss, of course, on income, but the dealer suffers a much greater loss—actual future business.

"Automobile manufacturers always have been keen to quickly supply the needs of their dealers in parts, even going so far as to get out catalogues on all kinds of repairs. Why can't the electrical business be run on the same plan of cooperation? We need it. We're all looking for more business and satisfied customers."



An Easy Lamp Window to Copy



## • ORGANIZATION ACTIVITIES •

A Department Devoted to the Reports of State and Local Meetings

### STATE CHAIRMEN AND SECRETARIES

State	Chairman	Secretary	State	Chairman	Secretary
ONTARIO, CANADA:	Kenneth A. McIntyre, 72 Victoria St., Toronto	J. A. McKay, 110 Church St., Toronto	MASSACHUSETTS:	Geo. B. Quinby, Boston	J. E. Wilson, 263 Summer St., Boston
BRITISH COLUMBIA:	E. Brettell, 781 Granville St., Vancouver	R. H. Hargreaves, Bus. Mgr., Vancouver	MICHIGAN:	Henry Roseberry, 41 Pearl St., Grand Rapids	H. F. Spier, 55 E. Main St., Battle Creek
CALIFORNIA:	C. L. Chamblin, 643 Call Bldg., San Francisco	J. W. Redpath, 643 Call Bldg., San Francisco	MINNESOTA:	F. J. Frasier, 223 S. 6th St., Minneapolis	Roy Constantine, Builders' Exchange Bldg., Minneapolis
COLORADO:	J. Fisher, Denver	W. A. J. Gascott, Denver	MISSOURI:	W. J. Squire, Kansas City	A. J. Burns, 533 Delaware St., Kansas City
CONNECTICUT:	E. S. Francis, 272 Asylum St., Hartford	Geo. M. Chapman, 43 E. Main St., Waterbury	NEW JERSEY:	C. R. Newman, 17½ Howe Ave., Passaic	Geo. E. Davis, 23 Central Ave., Newark
DISTRICT OF COL.	Frank T. Skull, Conduit Rd. and Elliott St. Washington	Howard P. Foley, 806 12th St., N. W., Washington	NEW YORK:	M. H. Johnson, 26 Bank Pl., Utica	J. P. Ryan, 26 Cortlandt St., New York City
FLORIDA:		J. C. Spencer, Palatka	OHIO:	C. M. Beltzhoover, 4th and Plum Streets, Cincinnati	Walter B. Keefer, 939 E. McMillan St., Cincinnati
GEORGIA:	Henry Morton, 1227 Broad St., Columbus	C. B. Anderson, Walker El. & Plain. Co., Columbus	OREGON:	Roy C. Kenney, 388 Burnside St., Portland	F. R. Whittlesey, 212 Henry Bldg., Portland
INDIANA:	A. B. Harris, Gary	Geo. L. Skillman, 29 S. Capital Ave., Indianapolis	PENNSYLVANIA:	Fred R. Smith, 507 Linden St., Scranton	M. G. Sellers, 1518 Sansom St., Philadelphia
IOWA:	Chas. H. Keller, 1081 Main St., Dubuque	F. Bernick, Jr., 208 High Ave., W., Okaloosa	TENNESSEE:	P. W. Curtis, Chattanooga	J. A. Fowler, 10 S. Second St., Memphis
KANSAS:	R. M. Sutton, 125 N. Market St., Wichita	H. S. Lee, 816 Kansas Ave., Topeka	WASHINGTON:	V. S. McKenney, Armour Bldg., Seattle	Forrest E. Smith, 205 Boston Block, Seattle
LOUISIANA:	C. S. Barnes, 513 Gravier St., New Orleans	R. S. Stearnes, 336 Camp St., New Orleans	WISCONSIN:	Paul C. Burrill, 135 Sycamore St., Milwaukee	H. M. Northrup, 25 Erie St., Milwaukee
MARYLAND:	S. C. Blumenthal, 505 N. Eutaw St., Baltimore	C. Philip Pitt, 15 E. Fayette St., Baltimore			

### List of Local Associations and Meetings

State and City	Local Secretary	Street Address	Time of Meet.	Place of Meet.	State and City	Local Secretary	Street Address	Time of Meet.	Place of Meet.
CALIFORNIA					NEW JERSEY				
Long Beach	A. R. Dunn		Tues. Evening		Atlantic City	F. P. Wright	16 Ohio Ave.	1st Thursday	Malatesta Hotel
Oakland	East Bay Elec'l Trades Ass'n	217 Syndicate Bldg.	Tuesdays 8 P.M.		Jersey City	Wm. Doellner	743 Bergen Ave.	1st Monday	P. S. Bldg.
Paso Robles	Mr. Castle		Twice a month		Newark	Geo. E. Davis	23 Central Ave.	Last Friday	23 Central Ave.
Sacramento	J. A. Woods		Sat. 12:15 P.M.	States Cafe	Pateron	H. M. Desaix	88 Ellison St.		P. S. Bldg.
San Francisco	L. R. Ardouin	645 New Call Bldg.			New York				
COLORADO					Albany	E. A. Jones	31 Hudson Ave.	1st Thursday	Pekin Rest'nt
Denver	L. B. Roberts	227 Coronado Bldg.	Mondays 8 P.M.	227 Coronado Bldg.	Binghamton	A. H. Hyle		1st & 3d Monday 8:30 P.M.	Johnson Bldg., 12 Nevins St.
CONNECTICUT					Brooklyn	H. W. Walcott		Fridays	507 Elec. Bldg.
Ansonia	G. M. Chapman	Waterbury			Buffalo	E. P. McCormick	555 Wash. St.		
Hartford	H. D. Hitchcock	45 Preston St.	Call of Sec'y 2d Thurs.	118 Asylum St.	Kingston	M. C. Rivenberg	Huntington		
Dist. Col.	H. P. Foley	806 12th St., N. W.	sa mo., 8 p. m.	Dewey Hotel	Nassau-Suffolk	J. A. Palmer	White Plains		
FLORIDA					Westchester	I. W. Austin			
Jacksonville	W. L. Joseph	Care Satchwell & Joseph Elec. Co.	1st Tuesday each month	208 Realty Bldg.	Watertown	L. B. Smith	26 Cortlandt St.	1st Thurs.	Penn'a Hotel
Miami	C. E. Debrauer	Care Biscayne Elec. Sup. Co.	Twice a week		N. Y. Sec. No. 1	John Perass	22 New Cham- bers St.	1st and 3d Wed. Evgs.	McAlpin Hotel
ILLINOIS					Independent				
Chicago	J. W. Collins	179 W. Wash- ington St.	2nd & 4th Wednesday		Sec. No. 3	L. F. Lwedecke	260 W. 86th St.	2d & 4th Wed.	226 W. 58th St.
E. St. Louis	O. J. Birnette		Sat. 2 P.M.	Arcade Bldg.	Ass'd. El. Con.	H. S. Beidelman		3d Thursday	
E. Moline	E. J. Bairnes			Rock Island	Onsetta	B. B. St. John	Bldg. Exch.	Mon. 6:45 P.M.	Builders' Exch.
Petu	J. Weigate		Mon. 8 P.M.		Schenectady	Mr. Spengler	McClellan St.	Subject to call	
INDIANA					Syracuse	H. N. Smith	P. O. Box 809	1st & 3d Monday	
Evansville	C. E. Jett		Wed. noon each week	Y. M. C. A.	Troy	H. W. Boudey	First St.	2nd Thursday	Gas Office
Gary	A. B. Harris	570 Washing- ton St.			Utica	A. Stiefvater	322 LaFayette St.	1st Monday	Elks' Club
Indianapolis	Geo. L. Skill- man	29 S. Capitol Ave.	1st & 3rd Thursday	Commercial Club	Ohio				
IOWA					Akron	L. C. Wall	12 S. High St.		Elec. Co.
Waterloo	J. A. Harleip	Care Waterloo Elec. Sup. Co.			Cincinnati	W. R. Keefer	939 E. Me- Millan St.	3 P. M.	Chamber of Commerce
KANSAS					Cleveland	Geo. D. Biery	E. 95th St.	1st & 3d Thurs.	Builders' Exch.
Topeka	H. S. Lee	816 Kansas Ave.	Mon. 6 P.M.	Elso Club	Columbus	O. A. Robins	Eraser Hopkins	2d Wed.	Builders' Exch.
KENTUCKY					Springfield	J. R. Yost		2d & 4th Fri.	
Paducah	W. R. Kitterjohn		Last Thurs. of month		Youngstown	W. Woebck	Hood Elec. Co.	Mon. 6 P.M.	New China Res.
LOUISIANA					Portland	F. R. Whittlesey	212 Henry Bldg.	2d & 4th Monday	Cham. of Com.
New Orleans	R. S. Stearnes	336 Camp St.	1st & 3d Wed.	Teocalli Hall	PENNSYLVANIA				
MARYLAND	C. P. Pitt	Bldrs' Exch.	3d Tuesday	Hotel Emerson	Bethlehem	A. H. Hill	510 W. Main St.		
Baltimore					Catsaugua	W. T. Kleppinger		Last Thursday	
MASSACHUSETTS					Erie	J. H. North	Star Elec. Co.	1st Tues.	Builders' Exch.
Boston	J. E. Wilson	263 Summer St.	3d Thursday	Boston City Club	Philadelphia	A. Deen	1518 Sansom St.	3rd Friday	Und'w'r's Office
Lynn	A. T. S. Sampson	434 Union St.	1st Mon. 4 P.M.	Auto Club, 44 Front St.	Pittsburgh	M. G. Sellers	Gr Gen. Elec. Co.	1st Tuesday	Builders' Exch.
Worcester	P. A. Coghill		2d Thursday		SOUTH CAROLINA				
MINNESOTA					Columbia	E. L. Cashion	Sumter, S. C.		
Duluth	Alfred L. Foster	210 W. 1st St.	1st Tuesday each month		Greenville	E. C. DeBruhl	Ideal Elec.		
MISSOURI					CHATTANOOGA				
Kansas City	L. G. Shumaker	407 E. 15th St.	Tues. Evenings	University Club	Knoxville	L. Thurmond	1104 Market St.	Wednesday Noons	Manhattan Cafe
St. Louis	A. J. Dunbar	Frisco Bldg.	Wed. Evening	Ann. Hotel	Lancaster	H. M. Moses	615 Market St.	Monthly	Rwy. Lt. Co.
NEBRASKA					Memphis	H. A. Street	285 Madison Av.	Ev. other Wed.	Allyn Cafe
Omaha	T. Mustain	315 Neville St.			Nashville	J. B. Mullen	Arcade	1st & 3d Wed.	Tulalie Hotel
					TEXAS				
					Dallas	P. B. Seastrunk	Lepcombs Elec. Co.	Wed. 8 P.M.	1805 Main St.
					Norfolk	K. D. Briggs			Arcade Bldg.
					WISCONSIN				
					Milwaukee	H. M. Northrup	25 Erie St.	2nd Tuesday	Maryland Hotel
					CANADA				
					Vancouver	H. R. Hargreaves	Pacific Bldg.		

Associations can secure listings here by sending necessary data to the National office



## Two Big Meetings Held in Canada

First in Winnipeg and Second in Montreal, Where Electrical Interests Get Together for Two Day Conventions With Many Interesting Sessions

Electrifying of Canada might well be the title of the story of Bill Goodwin's last visit to our neighbor on the north, such was the enthusiastic reception given him and Samuel Adams Chase at Montreal, and with M. C. Turpin, who has been substituting for Mr. Chase during his recent illness, at Winnipeg.

The first of these meetings was held in the Royal Alexandra Hotel in Winnipeg, on Thursday and Friday, October 14 and 15, by contractor-dealers as well as jobbers and manufacturers from all parts of Manitoba and other provinces of Canada.

Nearly 200 electrical men were in attendance, all of whom showed the greatest interest in problems presented by the speakers. Those Canadians believe in work and they kept Goodwin and Turpin on the go every minute as long as they were within the hospitable confines of the Canadian boundary.

The meeting were presided over by M. E. Gilmour, district manager of the Northern Electric Company, who is acting as chairman of the temporary organization of the contractor-dealers.

Regular meetings were held on Thursday morning and afternoon at which Messrs. Goodwin and Turpin expounded the principles of better merchandising, the former outlining some of the planks of the Goodwin platform and the latter dealing specifically with the advantages to be gained by the contractor-dealer, using advertising space and better methods of window trimming.

A luncheon was held at noon by the Manitoba Electric League, which was presided over by F. J. Pratt, purchasing

agent of the Winnipeg Electric Railway Company, and both of the visitors were called on for speeches.

In the evening a banquet was held under the auspices of the Winnipeg Contractor-Dealer Association and the Allied Interests of the Electrical Industries, presided over by Mr. Gilmour. An elaborately printed program added to the attractiveness of the occasion at which the visitors were called on for the fourth set of speeches in one day.

Guests of honor in addition to the visitors, were Premier of Manitoba, T. C. Norris; and Mayor of Winnipeg, Charles F. Gray; both of whom expressed their appreciation of the electrical industry and what it is doing for Canada. It is of interest to note in this connection that Mayor Gray is an electrical engineer, having formerly been engineer of the Westinghouse Company in Winnipeg. After the speeches were concluded an enjoyable dance was held in the spacious ballroom of the Royal Alexandra.

Friday morning and afternoon sessions were held, the former being devoted to a question box sessions at which Mr. Goodwin answered numerous questions regarding the conduct of an electrical contracting business. Judging from the number and variety of questions propounded by those in attendance, the contractor-dealers of Manitoba are thinking deeply about the many problems which confront them.

In the afternoon, Mr. Turpin gave an illustrated talk on the development of the industry, pointing out by means of statistics the enormous amount of busi-

ness that lay ahead awaiting the contractor-dealer who goes after it along scientific merchandising lines. He also called attention to the importance of industrial illumination and the revenue it would produce if properly cultivated.

Mr. Goodwin closed with an inspirational talk clearing up some slight misunderstandings that had arisen during the meetings and urging everyone to pull together for the good of the industry and at the same time make a profit for themselves.

On Saturday the visitors were given an informal luncheon by the local jobbers at which no speeches were made but a round table discussion was held on problems affecting the jobber. The afternoon was devoted to automobile trips through the city, whose wonderful resources and possibilities were pointed out. A number of the Winnipeg fraternity accompanied Mr. Goodwin to Montreal where an equally successful meeting was held. Mr. Turpin left the party at Winnipeg in order to go to Waterloo, Iowa, to attend a meeting of the Iowa State Association of Electrical Contractors and Dealers.

### *Large and Enthusiastic Gatherings At Montreal*

Mr. Chase was able to attend the meetings at Montreal with Mr. Goodwin on Tuesday and Wednesday, October 19 and 20, and the same spirit of cooperation which prevailed at Winnipeg was shown at these several interesting gatherings.

For some time previous to the event announcements had been made and in-



One of the Large Luncheon Gatherings of the Goodwin-Chase Meetings in the Windsor Hotel, Montreal, Canada, October 19 and 20

vitations extended to all those interested in the electrical industry to attend. Due to the fact that there are two contractor-dealer organizations in Montreal, one French and the other English, announcements were made in both languages and appeals were extended to come and hear "Discours par W. L. Goodwin, S. A. Chase et autres" on the subject of "La Vente d'Articles Electriques", etc., etc.

At the Tuesday luncheon Mr. Chase and Mr. Goodwin both talked on the subject of organization. They set forth the necessity of organization for purposes of coördination, and showed what could be accomplished thereby. N. Simoneau, president of the French section, spoke in French on the same subject. J. S. Norris, vice president of the Montreal Light, Heat & Power Co., was chairman of this meeting.

Sectional meetings were then held and everybody in attendance seemed to be in favor of carrying out the program previously proposed of forming what was to be termed the Electrical Coöperative Association of the Province of Quebec.

In the evening there was a largely attended meeting of contractor-dealers held, the principal address being delivered by William L. Goodwin on the broad subject of merchandising. Mr. Goodwin found no difficulty in holding the attention of his audience, as they all were eager to learn how to become better business men in their particular line of business.

#### *Second Day's Sessions*

There were about one hundred fifty representatives of the electrical business of the province at the Electrical Club luncheon at the Windsor at noon, where the initial steps for the organization of

the new coöperative association were acted upon, the chair being taken by W. H. Winter, president of the Montreal Electrical Club.

In his address Mr. Winter, after referring to government work with regard to electrical development in Ontario, said they should thank God that there still remained a sound and sane province where private enterprise was allowed to develop electrical enterprises for the service of the people and the safe and profitable investment of capital.

Samuel A. Chase followed and expressed pleasure at the evident development of the organization idea that had come about since their last meetings in February. With a business growing so rapidly as electrical development, he said the problem of each branch of the business was to learn something about the other and this was what was planned by the Coöperative Association. The idea, he said, had been tried out in the United States and Canada without a single failure and it was time that Quebec province, the natural home of electrical development, followed suit.

Then came W. L. Goodwin with an address on "What Coöperation Means to the Electrical Industry". He pointed out the original struggles of small associations which gradually developed into the coöperative idea, with results that could be measured in advantages not only to the industry, but to the general public in better service. Today the public in this province uses electrical devices to the extent of \$18,000,000 a year, but it is known that with proper organization and work to introduce these useful devices this could be increased to \$100,000,000 a year, and the association proposed to work to that end. The whole idea was to so coöperate as

to extend the use of electrical equipment and to so work together as to secure rates and prices which would be useful to the public, and at the same time give the business such profitable security as to attract new capital to carry on its rapid advancement from telephones to electric irons.

Brief addresses were also given by Dr. Carr of the Electrical News P. T. Davies, and others.

A vote was taken and it was unanimously decided to organize into a body known as the Electrical Coöperative Association of the Province of Quebec. This takes in contractor-dealers, manufacturers, jobbers, central stations, engineers, and practically all other branches of the electrical industry.

Following this a further organization meeting was held by the same delegates. At this meeting the proposed constitution of the new association was read and adopted.

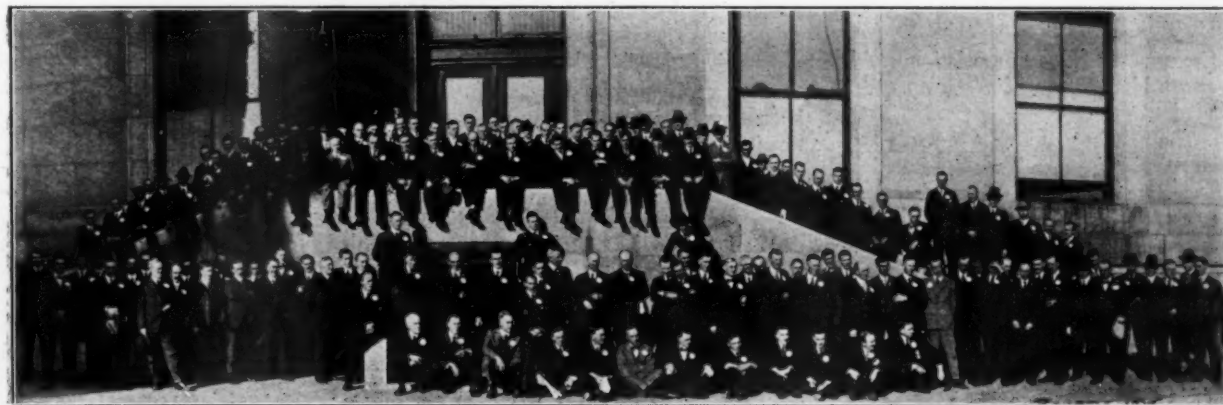
Officers were elected for the new born association as follows: Hon. president, J. S. Morris, M. L. H. and P. Consolidated; president, K. B. Thornton, Montreal Public Service Corporation; vice presidents, J. B. Foodyatt, Southern Canada Power Co., Ltd.; J. W. Pilcher, Canadian General Electric Co.; M. K. Pike, Northern Electric Co., Ltd.; F. J. Parsons, N. Simoneau and Dr. L. A. Herdt.

Advisory committee: W. O'Brien, L. C. Haskell, R. J. Beaumont, N. L. Engel, W. J. Lynch, Quebec Railway, Light & Power Co.

Manufacturers' representatives: C. Duncan, George Wight, C. F. Medbury.

Jobbers' representatives: J. W. Pilcher, M. K. Pike, S. W. Smith.

Contractor-dealers' representatives: J. A. St. Amour, F. Parsons, A. Doddridge, J. Nault, W. Wiggett.



Big Gathering of Electrical Men at Winnipeg, Manitoba, on the Occasion of Visit from William L. Goodwin and M. C. Turpin, Shown in Front Row, Center

Consulting engineers: J. M. Robertson, DeGaspé Beaubien.

Bell Telephone Co. representative: W. H. Winter, general superintendent of plant, Bell Telephone Co.

### Iowa State Meeting

Held in Waterloo in October and Attended by More Than a Hundred Electrical Men

"The best electrical convention ever held in the state of Iowa" seemed to be the unanimous opinion of those who attended the meeting of the Iowa State Association of Electrical Contractor-Dealers held in the city of Waterloo, Iowa, October 20 and 21.

"Waterloo Way Wins," the slogan of the convention city, surely was effective, and Waterloo, an attractive city of some 37,000 people in the heart of the great empire of the middle west, and what is said to be the richest agricultural section of the world, proved to be a most acceptable host. The identification badge given those in attendance was a reproduction of the map of the state of Iowa.

The registration reached the 100 mark, the majority of whom were contractor-dealers, and the interest taken in the meetings was significant of a broader view being taken in the problems confronting the industry. A striking feature of the convention was that the attendance of Des Moines representatives was greater than it was last year when the convention was held in the city of Des Moines.

The unusually large attendance was due in no small measure to the persistent and effective work done by the capable secretary, F. L. Bernick, Jr., of Oskaloosa, who sent out several series of letters. An unusually effective letter was sent out by H. F. Cole of Cole & Sweetman, a member of the Executive Committee, on the letterhead of the Greater Waterloo Association, which also told the story of Waterloo and its advantages.

The opening address was made by J. E. Sweeney, a member of the National Executive Committee, and secretary-treasurer of the Waterloo Electrical Supply Company, which incidentally has one of the most attractive electrical stores to be found anywhere in the country. Mr. Sweeney introduced Hon. T. E. Leeper who welcomed the association to Waterloo on behalf of the mayor, who was unable to attend, and then turned the meeting over to State

Chairman C. H. Keller of Dubuque, who presided at all of the meetings with signal ability.

The first paper was presented by W. D. Yates of the General Electric Company on the very important subject of Standardization, which, said the speaker, is the measure of a nation's civilization. Everyone is interested in this subject, especially the electrical men, because of what it means to them.

As an example of what it has done, Mr. Yates called attention to the fact that there were now on exhibition by one of the lamp manufacturers, 179 different types of lamp bases formerly used. These have now been reduced to six standard bases used by all manufacturers. Improvement in fuse bases and blocks and knife switches has been made in the same manner.

There is now under way a movement to establish three important standardizations, namely: (1) a nation wide adoption of 110 volts and 60 cycles; (2) hanging fixtures by some easy method; (3) plugs and receptacles, there now being 37 different types on the market.

Standardization can be greatly aided by the contractor-dealer refusing to sell non-standard articles. Quite a spirited discussion took place on the paper, indicating a wide spread interest on the part of the members in the subject.

Industrial illumination was discussed in a most interesting illustrated talk by Otis L. Johnson of the Benjamin Electric Company, in which he brought home to those present the vast importance of this subject and the part the contractor-dealer should take in securing increased business along these lines. He showed by means of statistics and lantern slides the part that better lighting is playing in increasing production, decreasing spoilage, and accidents and bettering the morale of employees in industrial plants.

A carefully prepared paper full of interesting statistics and helpful suggestions on the sale of "Household Appliances" was presented by A. C. Nodine, Advertising Manager of the Electric Vacuum Cleaner Co., Cleveland, Ohio. There are, said he, 11,250,000 homes in the United States, reached by central station lines and only 6,250,000 homes wired for electricity, leaving 5,000,000 homes reached by central station lines that are not users of electricity, forming an immediate field for the contractor-dealer.

A more extensive field lies in the approximately 9,000,000 homes in the United States not reached by electric lines and one that calls for more development work. Further statistics applying to the State of Iowa were given by the author. There are two problems confronting the contractor-dealer, said he, that are of prime importance.

1. That he should install the necessary equipment to make his store a real service station for efficient and immediate service of every electrical device he sells.

2. That he should, through a more complete working arrangement with his bank, through a better cost system, through a reduction of his overhead, enhance his financial responsibility and thereby his general trade credit. This might be done too by an arrangement to discount his time paper on installment sales of appliances, so he would not be compelled to carry this load on his own capital.

The reading of the paper provoked a hearty discussion which was participated in by a number of contractor-dealers as well as representatives of jobbers and manufacturers.

H. A. Harvey of the Westinghouse Lamp Company, Chicago, spoke on Sales Help and Coöperation, emphasizing the helps that were freely offered by the various manufacturers and the importance of making good use of this material and not throwing it aside. He also urged the dealers to advertise in their local papers and thus tie in with the advertising done nationally by the manufacturers.

The work being done to advance the industry by the Society for Electrical Development was explained by H. T. Matthews, of the New York Office.

The Relation of the Central Station to the Contractor-Dealer was ably discussed by C. A. Nash of the Peoples Light Company, Davenport, who reminded the contractor-dealers that they were just as necessary to the central station as it is to them. The prosperity of a town is dependent on the central station and vice versa. In some cases there is competition with the contractor-dealer along merchandising lines, but there can be no objection to such competition provided it is fair.

The central station, which must have the good will of the public to succeed has been handicapped because, unlike other institutions it is unable to pass along the increased costs of its products



to the ultimate consumer, but must await the decision of a rate making utility commission. In many towns the central stations are not making any extensions to their lines, though badly needed, because of lack of funds. In closing, Mr. Nash gave as his definition of salesmanship the six "P's," "The Power to Persuade Plenty of People to Purchase at a Profit."

E. T. McDonough, Secretary of the Greater Waterloo Association, who has done some splendid work in behalf of his city, gave an excellent talk on the benefits of organization urging the members to take off their coats and work for the Association and not leave it all to the officers and then criticize them because they didn't do it right. He also paid his respects in no uncertain terms to the man who refuses to join an organization "until you accomplish something." "Why not get in and help them accomplish something?" said he.

Some very helpful data on estimating costs was given by Albert Uhl, of the Electrical Estimator's Club of Chicago, who went into the question quite extensively, showing by means of estimate sheets on various jobs just how each item should be figured.

At the banquet Wednesday evening held in the Russel Lamson Hotel, M. C. Turpin of the Westinghouse Merchandising Bureau, New York City, gave an illustrated talk on Modern Developments in the Electrical Industry. He showed by pictures and statistics how it is being used in the home, on the farm, in the various industries, for ship propulsion and railway electrification. In each case he was careful to point out just what business was open to the contractor-dealer if he would only go after it.

Mr. Turpin also called attention to what the use of electricity was doing in the way of conservation of fuel by use of water power instead of coal, and in a humanitarian way by its use in medicine and surgery. Judging by the active discussion which followed, the address was well received.

At the final session of the association quite an active discussion was participated in by a number of contractors on the subject of labor. A separate association has been formed to handle the labor situation so that each locality may know what is being done in the others and the same prices prevail. Each member is assessed \$3 a year dues and a report is made once a month by the secretary to the members so that each

may know what the other is doing. Considerable opposition was expressed by the members to a separate organization being formed to handle the labor question, it being felt that this was the province of the association.

In order to assist the association financially, the representatives of the jobbers and manufacturers traveling in Iowa organized themselves into the Iowa Electrical League which has as its object the promotion of the electrical industry. The dues are \$25 per year and all money in excess of operating expenses is to be paid into the treasury of the Iowa State Electrical Contractor-Dealers' Association.

### Hudson County Meeting

Held in New Jersey on Wednesday Evening, November 10

What the newspapers call a select but appreciative audience constituted the regular monthly meeting of the Hudson County Electric Club of Electrical Contractors and Dealers, which was held at Wickiup Inn., Jersey City, Wednesday evening, November 10.

In the absence of the chairman, H. J. Rietz, who is confined to his home by illness, state chairman Charles R. Newman of Passaic, N. J., was asked to preside. Mr. Newman made an interesting talk, telling of the good work that is being done throughout the state in centers where contractor-dealers are organized, citing a number of instances where the members of the association had been able to materially assist each other in their business, whereas had it not been for the association bringing them together they would not have been able to accomplish the same results. Mr. Newman also told of the Baltimore convention and mentioned a number of interesting developments that are now under way by the national organization, which will be of advantage to the members at large.

At the request of the general manager, W. H. Morton, M. C. Turpin of the Westinghouse Merchandising Bureau attended the meeting and gave a talk. He devoted the most of his address to the importance of the National Association of Electrical Contractors and Dealers and the benefits which can be obtained by joining it and working in its behalf. The speaker stated that the accounting system provided for members by the National Association is alone worth the membership fee. He also emphasized the importance of the members taking off their coats and ac-

tually doing some work for the association rather than sitting around waiting for the officers to do the work and then criticising them because it was not done in a different manner.

Following Mr. Turpin's talk a number of other speakers were called upon, including Messrs. Frank De Witt, secretary William Doellner, E. N. Altman of the Public Service Company and E. Ammon.

Although Secretary Doellner had sent out several letters of invitation to the meeting and a most excellent spread of good things to eat and drink was provided, the Hudson County members did not seem to take the interest that had been expected of them by the officers who, however, have not given up hope of working up an interest and they should be supported by their fellow members.

### Lehigh Valley Association

Strength and Activity Reflected in Business of Members

One of the strongest and most active of the Pennsylvania districts is the Lehigh Valley Electrical Contractors' Association with headquarters at Allentown. This association has thirty-two local members covering eight cities and towns. James E. Hauck of Easton, is chairman, Arthur W. Hill of Bethlehem, is secretary; Mr. Smith of Allentown, is treasurer; and the association includes among its very active members R. W. Keck of Allentown, who is also vice chairman of the State Association.

The association has adopted the very successful plan of holding its monthly meetings in a different town each month, and that their average attendance has been about twenty shows the interest taken in these meetings. Another plan which has proven very successful is the selecting each month of a different member who is held responsible for the program and arrangements for the succeeding meeting.

Meetings are held at six o'clock, with a good dinner to start with, followed by an hour or two devoted to business and discussion.

Special Representative Davis, from the National Headquarters office spent several days in the district recently and reports especially the fine appearance of the electrical stores of the association members. Few places will average as high in retail development and the dealers all report that the results have justified every effort they have made.

## News in the Advertising Columns

### Readers of Our Magazine Are Urged to Show Appreciation of Publicity

One of the important functions of every magazine today is to bring to the readers through its advertising columns the latest news of the world's markets and the services offered by progressive concerns. This is especially true of business publications.

The man who succeeds in business today is one who follows closely the opportunities offered through advertising columns to obtain the highest standards of materials, the most advanced ideas, and the best policies of service from business houses who lay the merits of their goods and policies before the public in their advertisements.

Because the advertiser pays for the space in which he presents his messages to us, and because all magazines must have income from advertising to reach us at anything like their nominal cost of today, we are prone to forget the importance to us of these advertising columns as we read our magazines. Magazines would lose a large proportion of their interest if they lost their beautifully illustrated, tersely written, "silent salesmen" advertising.

How many times we hear busy men say: "I have only had time to look through the illustrations and advertisements in my magazine this issue".

The advertiser must have some sign by which he may measure the interest with which his advertising is received if he is to continue the investment in advertising space. In many cases this may be measured directly by orders received, or indirectly by increased business in the advertiser's goods or use of his services.

A great deal of advertising, however, is difficult to measure in results, as it is designed to create good will, better understanding of high standards or sound policies, or to hold the friendship of a trade already patrons of the advertiser, very much as we write to our friends that they may know we value their friendship.

We would not receive such communications from our friends without acknowledging them. Yet many of us pass over the welcome and attractive greetings in the advertisements of the business concerns we rate very highly for their sterling qualities in standards of goods, services or policies, and never once acknowledge our appreciation of their work.

The advertiser uses the columns of the magazine to reach individually and personally each one of the thousands of readers. If he is made to feel that his message reaches the attention of the readers he considers the results worth far more than the cost; if it is constantly ignored, he grows to feel the effort is unappreciated and not worth while.

It is not necessary that our acknowledgment take the form of a direct or additional order of goods. A brief message to an advertiser that we have found his goods dependable, his services satisfactory, or that his policies have our respect and approval, will go a long way to justify his efforts to place his message in our hands.

It is not necessary that we write to every advertiser whose attractive greeting comes to our attention. Let us each one, however, write a letter now and then to one or two concerns whose products or services have met our ideals or our needs.

The ELECTRICAL CONTRACTOR-DEALER magazine occupies a unique place among trade journals. It belongs to us as members of the National Association; its results make possible the valuable work of our association which we could not share without the added revenue which it affords.

Because it belongs to the association members is published by the association, and is designed solely for the readers' interests, it is read and studied more fully perhaps than any other journal the electrical contractor-dealer receives. Advertisers realize that their advertising in the ELECTRICAL CONTRACTOR-DEALER magazine receives the attention of subscribers and is worth more than the very reasonable rates they pay for their space. Let us prove conclusively to them that these are facts.

A few words from each of us to several advertisers in the ELECTRICAL CONTRACTOR-DEALER whose desirable output, progressive ideas or admirable policies win our approval, is enough to show our appreciation.

Multiplied by our thousands of fellow readers, it will bring a weight of understanding that will insure the determination of every progressive business concern to come to us regularly through the advertising columns of the ELECTRICAL CONTRACTOR-DEALER.

It is our magazine; it is our opportunity; it is worth our effort! Write to two or three advertisers today!

## Secretary of the Treasury Sends Reply

### Acknowledges Receipt of Resolution Passed by National Executive Committee

The following letter which was received by General Manager W. H. Morton, explains itself

"Dear Sir: I have received a copy of the resolution adopted by the National Association of Electrical Contractors and Dealers at its Convention in Baltimore, Maryland, October 6, 1920, advising its membership of the benefits, both to their country and to themselves, which will accrue from participation in systematized purchase of Government securities.

"This action by the Association of Electrical Contractors and Dealers will be most helpful in perpetuating the lessons in thrift and saving learned by our people during the war. The Treasury Department deeply appreciates the fine patriotism and sound judgment which actuated this resolution. Please convey to the delegates my sincere thanks.

"Very truly yours,  
"D. F. Houston."

The resolution passed by the National Executive Committee at Baltimore, is as follows:

Whereas, It is our firm belief that the practice of thrift and savings makes for moral strength and contentment, and that waste and extravagance not only cause high prices but instability and deterioration, and

Whereas, The prevailing low prices of Liberty Bonds and Victory Notes make these issues an ideal medium for the practice of thrift and sale, profitable investment; and

Whereas, We believe that our individual members can benefit both their country and themselves by participating in systemized purchase of Government securities; therefore, be it

Resolved, By the National Association of Electrical Contractors and Dealers at its Twentieth Annual Convention assembled: (1) That the members be urged to invest as much of their funds as possible in Liberty Bonds and Victory Notes. (2) That each member be asked to interest all other members in the purchase of Liberty Bonds and Victory Notes. (3) That the Honorable D. F. Houston, Secretary of the Treasury, be apprised of the action of the National Association of Electrical Contractors and Dealers in adopting this resolution,

and of a desire on the part of this organization to have the movement made nationally popular.

### Watt Hour Club Dines

**Feast of Fun, Food, and Philosophy Flow Freely at Function**

The New York and Queens Electric Light and Power Company gave a dinner to the Watt Hour Club on Tuesday evening, November 9, at the Chamber of Commerce, Long Island City.

The following unique electric menu was interspersed with jollity and singing, concluding with "Ohm, Sweet Ohm." Charles A. Barton was toastmaster and George H. Duffield gave "A Little Chat About Coöperation."

Menu—Creme of Coöperation a la Watthour (if we don't eat it we both starve); Three Wire Celery; Rubber Covered Olives; Armored Roast Chicken; Magnetic Field Potatoes; Mashed Peas a l'installation; Type C. Salad, Mazda Style; Polarized Ice Cream; BX Cakes; High Tension Cheese; Cutout Crackers; 110 Volt Coffee; Guy Stub Cigars; Conduit Cigarettes.

### Indiana State Meeting

On Wednesday and Thursday, December 1 and 2, the Indiana State Association of Electrical Contractors and Dealers hold a meeting at South Bend, Indiana. Wm. L. Goodwin, Samuel Adams Chase, and Laurence W. Davis will attend.

Some of the features of entertainment are a trip through the Studebaker plant and a visit to the University of Notre Dame.

### Helping Utilities

The National Electric Light Association, through its publicity department in coöperation with the Investment Bankers' Association and its own Public Relations Section, has started a good will campaign for the benefit of electric utilities.

As a part of this national campaign four booklets have been issued under the following attractive titles: "Demand Which Increases Dividends"; "Greater Earning Power of Present Day Interests"; "Where the Dollar Brings Returns"; and "The Power of Coöperation." Each of these booklets is a compelling argument in favor of electric utilities securities.

It is the plan of the N. E. L. A. to have member companies and others that

are interested, purchase these booklets in quantities and send them to customers and prospects. The resolution passed by the recent convention of the Investment Bankers' Association of America is quoted on the back cover of each booklet.

### Death of A. W. Sanborn

**Passed Away at South Dover, Maine, at the Age of Seventy-Three**

Members of the National Association of Electrical Contractors and Dealers were grieved to learn of the death of Ashley W. Sanborn, who died of Bright's disease on September 24, aged



**Ashley W. Sanborn**

73, at South Dover, Maine, where he was raised and had spent his boyhood days.

Mr. Sanborn was for many years active in the electrical business. He was treasurer of the Sanborn Electric Company, Indianapolis, Indiana, the head of that company being his son, Gerry M. Sanborn, who is a member of the National Executive Committee of the National Association of Electrical Contractor and Dealers.

Mr. Sanborn was well known in the electrical trade, particularly in the middle west, where he left many friends to mourn his death.

### Permanent Demonstrations of Lighting

A special lighting committee formed by the National Electric Light Association, will carry out the work of installing permanent lighting demonstra-

tions in thirty-one cities throughout the country. Ward Harrison, who presented this demonstration before the National Convention at Baltimore last October, is the field representative for this work.

The chairman of the Lighting Sales Bureau of the N. E. L. A., Oliver Hogue, has requested the non-technical lighting advertising committee to act as the publicity agent in each city.

### Society for Electrical Development

The directors of The Society for Electrical Development held their semi-annual meeting at the offices of the Society on Tuesday, November 9, President W. W. Freeman presiding.

General Manager James M. Wake-man presented his report, in which he pointed out that since the first of the year 249 members have joined the Society, of which 86 joined in the past two months. The representatives of the Society have visited the principal cities in 28 states and some of the larger cities of Canada.

The subject of formation of local organizations to carry on the development work and their affiliation with the Society was thoroughly discussed. It was felt that the formation of these local electrical organizations is a move in the right direction and should be encouraged by the Society, which should take the lead in the organization of such local associations. The Society supplies the initial service, national in its character, which can be greatly enhanced by intensive local application through the local organizations. A special committee was appointed to work out plans for this.

Another phase of the work commented upon is the compilation of data in regard to electrical fires. The statistics so far compiled covering the greater part of the United States show that less than 3 % of the fires in this country are caused by electricity and more than half the fires designated as electrical occur out of doors on poles, trolley-cars and other places, which would not properly come under the definition of electrical fires, thus showing only a trifle over 1% of the total fires being electrical in their origin.

A vacancy existing on the Board of Directors among the representatives at large, Henry L. Doherty, in recognition of his services to the Society, was appointed.



# The Lighting Fixture Dealers' Society of America

*Its Aims and Purposes as Set Forth in Its Literature,  
With Examples of Its Present Efficient Activities*

Taking as its motto: "We Light America," and using a torch of light as its emblem, the Lighting Fixture Dealers' Society of America is a lively organization that is coming to the fore along with the advance of electric lighting.

J. L. Wolf is the secretary, with offices in the Builders' Exchange, Cleveland, Ohio. The other officers are as follows: C. J. Netting, president, C. J. Netting Co., Detroit; W. A. Hadler, vice president, W. A. Hadler Co., Buffalo; Chas. E. Scott, treasurer, Detroit Mantel & Tile Co., Detroit.

Directors: E. L. Gross, The Gross Chandelier Co., St. Louis; J. A. A. Hamilton, The Hamilton Co., Cleveland; W. L. Collins, The Pittsburgh Gas & Electric Fixture Co., Pittsburgh; Wm. E. Thompson, The Hatfield Electric Co., Indianapolis, Ind.

The objects of the association are the advancement of the retail lighting fixture business, the reform of abuses therein, the promotion of friendly relations between the different elements in the trade, the establishment of closer relations with all manufacturers in these lines of the improvement of conditions general interest by all proper and legitimate means.

Any individual or firm is eligible to membership who maintains a retail show room and displays therein lighting fixtures, glassware, trimmings and kindred articles, and who has a complete organization devoted to the buying, selling and installing of lighting fixtures and whose application for membership has been acted upon and approved by the executive committee.

## *Scope and Activities.*

From a booklet recently sent out by the secretary, showing the scope and activities of this fixture dealer body, the following is quoted:

Just as soon as this society enrolls a majority of the representative and progressive dealers of the country, it will have the power and resources to put into effect many reforms of abuses and of unprofitable trade customs, and also to initiate several important future developments. These indirect benefits which you will receive from your membership will bring enormous financial

gains to all dealers in lighting fixtures.

The first objective is the one of annual changes in the style of lighting fixtures, an innovation which has already been inaugurated by means of the 1920 Fixture Market. This style show—the Market can well be called such—will sell to the dealer the advantage in yearly changes in style.

As we gain in membership it is planned to advertise extensively in the national advertising medium, such as the *Saturday Evening Post*, *Good Housekeeping*, *Ladies' Home Journal*, *House and Garden*, etc., in conjunction with The National Council of Lighting Fixture Manufacturers. This advertising will bring before the buying public the idea of changing fixtures to correspond to changes in furniture and decorations.

Such a campaign, it is absolutely believed, will easily, after a few years, double the natural buying desires of the public throughout the country and you, of course, will be benefited in direct proportion.

The second objective has equal possibilities. This is a matter of education by the dealers in conjunction with the Manufacturers' Council and which will bring to the attention of every home builder, contractor and architect, the necessity of larger allowances for lighting fixtures. This campaign will show that, with a larger percent of allowance for lighting fixtures, many times the benefit will be received by the home owner in increased beauty, service and convenience.

This publicity should also double the natural demand for our wares within a five year period.

Both of these campaigns are large undertakings—the cost is large, the returns large. They can succeed in full measure only when the lighting fixture dealers of this country realize that "in organization there is both strength and profit."

## *Helps for Dealers.*

This society has published a twelve page folder, which, when properly used, simplifies the pricing and marketing of lighting fixtures fifty percent. This plan is adaptable to any section of the country and can be revised to cover any wage scale situation.

The society has on hand over two hundred order and estimate blanks. These have been gathered from prominent dealers throughout the country and are sent upon request to any member. In this way any member may profit by the experiences of others in designing his own estimate and order blanks.

The society helps, when requested, in the forming of locals, and has on hand complete information, rules, ideas, etc., which are now in use in a number of successful local clubs and that save years of time and costly mistakes in perfecting the organization of such clubs.

The society also is prepared to furnish very opportune ideas and suggestions for the bringing of revenue into the treasuries of local club.

"Coöperation"—the slogan of the new era in the lighting fixture industry—is utilized to the fullest extent by this society. One of the most important benefits that this coöperation brings to a dealer member concerns the moving of stock. From time to time a dealer finds himself with a surplus amount of stock on hand. The society is constantly prepared to render aid in such cases. A list of this stock is forwarded to the various other members of the society and all available assistance is given the dealer in disposing of the material.

On the other hand, a dealer occasionally finds himself unable to fill an important order simply because he is short in his stock. This dealer can obtain almost immediate assistance through the society. His needs, if he so requests, are communicated to the other members of the society and if the stock is available, he is given immediate help.

This society is very active in bringing about standardization in glassware fitters and fixture holders.

To further and expedite this important matter, we have furnished blue prints, suggesting standard sizes for glass fitters to both the Illuminating Glassware Guild and The National Council of Lighting Fixture Manufacturers.

Some glassware manufacturers have already begun to make their fitters in accordance with these standards.

In a few years the old difficulties of

glass not fitting into holders far enough for screws to hold, and also holders not being large enough in diameter, necessitating the glass being chipped, will be a thing of the past.

#### *An Active Official*

Mr. Wolf is the kind of a secretary that is always on the job. When the question of a tax on gold and silver plated fixtures came up, he went down to Washington and explained matters in person. Then he kept up a lively correspondence until a decision was arrived at as shown by the following letter from James M. Baker, deputy commissioner of the assessment division, under date of October 18:

"In reply to your letter of October 11, 1920, you are advised that the question of the applicability of tax imposed by Section 905 of the Revenue Act of 1918 to sales of gold and silver plated non-portable lighting fixtures has been given further consideration, and the department now holds that non-portable lighting fixtures ornamented, mounted or fitted with precious metals or imitations thereof, or ivory, are not articles primarily designed or intended for personal use or adornment or ornament and display in the home and are not subject to tax under Section 905."

Word comes from Mr. Wolf that he is devoting much time and effort on a membership drive. In regard to the coming Lighting Fixture Market he has sent out a letter from which the following paragraphs are quoted:

"Right now the society is carrying forward a big publicity program which culminates in the Second Annual Lighting Fixture Market to be held in Elmwood Music Hall, Buffalo, in February. The purpose of this campaign is to awaken the whole fixture industry to their own importance, to show them new ways to get business and how to make more on the business they get. The live, ambitious, progressive dealers are in this movement or are joining it now.

"We know that you have the interest of the lighting fixture industry at heart, that you want to help cut out the abuses and improve conditions so that you will do more business, make more money, and have less 'grief'. All by yourself you cannot do much to accomplish these things, but by joining with other progressive fixture dealers, we can together accomplish anything we set our shoulder to. You know it!"

Mr. Wolf's literature all has the bright glow of the live wire and his vigorous activities must naturally result in getting what he goes after at all times.

### **News Notes Concerning Electrical Contractor-Dealers**

#### **Business Changes, Store Improvements, and New Establishments Opened**

Ernest Dalhein has opened a new electric store in Minot, North Dakota.

J. A. Cole has opened a new electric store in Temperance, Michigan.

Standard Electric Service Company, New Castle, Pa., has purchased the business of the Miller Electric Company, 321 East Washington Street, and will deal in electrical appliances and fixtures.

Virgil Aldrich has opened a new electric store in Beaver City, Nebraska.

Del. J. Tripp Electric Company has opened a new electric store in Hebron, Nebraska.

George Andrew will open a store on Main Street, Pen Argyle, Pa., and will handle electric irons, washing machines, etc., and do housewiring and other electrical work.

Julius Ritt has opened a new electric store in St. Peter, Minnesota.

Niblack & Fulton have opened a new electric store in Warren, Indiana.

E. W. Wells and A. S. Miller have opened a new electric store in South Brownsville, Pa., and will also do contract work.

E. H. Wilkins will open a new electric store on Pittsburgh Street, Evans City, Pa.

F. & C. Roberts have opened a new electric store in Deerfield, Michigan.

The Farm Electric Equipment Company has been incorporation in Saginaw, Michigan, with a capital stock of \$25,000 and \$15,000 subscribed.

Chas. Miller will open a new electric store on Central Avenue, Cheltenham, Pa.

Averett Electric Company has opened a new electric store in Union City, Tenn.

B. L. Middleton has opened a new electric store in Cass City, Michigan.

The Smith Electric Company has opened a new electric store at 101 North 9th Street, Reading, Pa.

Springer & Harch have opened a new electric store in Ely, Minnesota.

M. B. Coon will open a new electric store in Hancock, Michigan.

Edmonds Bros. & Davenport will carry a full line of electrical appliances in their business at West Main Street, Waxahachie, Texas.

Egyptian Electric Company of which Roy Reed and S. S. Starrick are the proprietors, have opened a new electric store in Marion, Illinois.

Denton Electrical Company will open a new electric store at 13th and Walnut Streets, Kansas City, Mo.

Help-U-Electrical Company has opened a new electric store at 736 Elmwood Avenue, Buffalo, New York. David Goldman and S. C. Wisbaum are the proprietors.

I. W. Sanford has opened a new electric supply and repair shop at 244 South High Street, Columbus, Ohio.

F. B. Shafer & Son, proprietors of The Electric Shop, have opened a new electric store at 114 North Second Street, Coeur d'Alene, Idaho.

Electric Power Equipment Corporation of which F. W. Dinsmore, 709 Greenwood Avenue, Trenton, New Jersey, L. Robert Lewis, 6,840 Goreton Street, Philadelphia, Pa., and others are incorporators, has opened an electric store in Philadelphia, Pa.

General Supply Company has opened a new electric store in Magnolia, Mississippi.

Alfo Electric Company has opened a new electric store and repair shop at 21 North Jonathan Street, Hagerstown, Maryland. A. L. Foreman is manager. Incorporated capital \$10,000 with \$5,000 subscribed. Incorporators are Frank A. Vogelsang, Bristol, Va., and others.

Waterbury Electrical Company will open a new electric store at 262 North Main Street, Waterbury, Conn.

Horace Thing will open a new electric store on Temple Street, Waterville, Maine.

Daniel L. Bradley, 11 West Main Street, will move to larger quarters at 147 West Main Street, Norristown, Pa.

La Jara Electric Company has opened a new electric store at La Jara, Colorado. Electrical fixtures will be their specialty.

The Electrical Engineering & Mechanical Contracting Company has

opened an electric store in Philadelphia, Pa. Incorporated capital \$5,000. Incorporators are George A. Bailey, 5,000 Woodland Avenue, treasurer, and others.

Peterson Electric Company, now located on South Main Street, will move to new quarters on Eleventh and Main Streets, Wheeling, West Va., where they will carry a full line of electrical supplies.

W. B. Johnson will open a new electric store at 406 East Wilson Street, Madison, Wisconsin.

Guy O. Parker has opened a new electrical shop in Plant City, Florida.

V. N. E. Brown has opened a new electric store in Waterloo, Indiana.

Hayes Home Appliance Company will open a new electric store at 417 Madison Avenue, Toledo, Ohio.

Louis D. Rubin Electrical Company, with an electrical supply store at 345 King Street, Charleston, S. C., will increase capital stock from \$10,000 to \$25,000.

W. K. Weaver has opened a new electric store in the Shoaf Building, Rosella Avenue, Wetts, California.

Electric Supply Company has opened a new electric store in Frazee, Minnesota.

Hardin County Electric Company has opened an electrical supply store in Iowa Falls, Iowa. Incorporated capital \$5,000. Incorporators are George C. Pyle and others.

Sheeler & Wendling will open an electrical contracting business at North Street, Tremont, Pa.

M. F. Greene has opened a new electric store at Ferndale, Washington.

East Bay Electric Company has opened a new electrical supply and fixture store in the Keser Building, Richmond, California.

Capt. Ayers will open an electrical fixture store in the Beucham Building, Orlando, Florida.

Home Electric Appliance Company has opened an electric store in Nashville, Tenn. Incorporated capital \$25,000. Incorporators are J. C. Akers and others.

F. W. Baitinger and H. C. Panchot have opened a new electric store at Enumclaw, Washington.

Service Electrical Company of which Paul A. Maker is proprietor, has open-

ed a new electric store at 1,230 Monroe Street, Toledo, Ohio.

L. M. Parkman has opened a new electrical fixture store at Eudora, Arkansas. Capital \$10,000.

Citizens Electric Company has opened and new electric store in Brigham City, Utah. Eskelson, Lillywhite & Eskelson are the proprietors.

### Condensed Notes of Interest to the Trade

The Lakewood Engineering Company of Cleveland recently issued a booklet on the subject of industrial transportation which is a strong argument in favor of the methods advocated by that company.

Majestic Electric Development Company of San Francisco recently started an intensive advertising campaign which will cover twenty-five cities west of the Mississippi river. About thirty newspapers are used, and in addition an extensive billboard campaign in San Francisco.

Carricite is a new product used for mending broken or burned out electric heating elements. It is manufactured by the Carricite Company of Chicago.

The Benjamin Electric Manufacturing Company of Chicago announces that two "extra" full page advertisements, appearing in the *Saturday Evening Post* of November 6 and December 4, bring the total number of selling impressions on the Benjamin No. 92 Two-Way Plug up to One Hundred and Forty-one Millions for 1920 alone.

The annual Lighting Fixture Market is to be held in Buffalo, N. Y., next February. C. H. Hofrichter, 8410 Lake Avenue, Cleveland, Ohio, is in direct charge of the affair.

Announcement is made of the completion of plans for an increase in capitalization of the Universal Products Company, of Sandusky, Ohio, and Oshkosh, Wis., to \$500,000. The plans include the purchase of the H. C. Doman Company, of Oshkosh, Wis., and the removal of the main offices from Sandusky, Ohio, to Oshkosh, Wis. The new company will continue to manufacture the Universal Products electric lighting and power plants and the Doman marine engines.

"C-H Motor Control Apparatus for Pumps, Compressors and Similar Service," is the title of a booklet recently published by The Cutler-Hammer Mfg.

Co. of Milwaukee, Wis. This booklet, which is known as Publication 860, takes up in a general way the control of motor-driven pumps and compressors on water and compressed air systems, in mines, on board ships, for hydraulic elevators, etc., and tells how Cutler-Hammer has attained an enviable national reputation in this field. Every C-H Product used for this class of service is described, including manual and automatic starters and speed regulators, and accessories, such as pressure regulators, float switches, push buttons, etc.

Harry B. Joyce, formerly power engineer of The United Electric Light & Power Company, New York, has joined forces with Johnson & Benham, Inc., Engineers, 150 Nassau Street, New York.

The Cutler-Hammer Mfg. Co., of Milwaukee and New York, have recently acquired the property at 137th St. and Southern Boulevard, in New York City, as an additional plant for the manufacture of "Thermoplax" and "Pyroplax" molded insulation. The five-story building on this property has been completely equipped with presses for this work. When working at capacity the new plant will have an output equal to the company's insulation plant in Milwaukee, which has been running two shifts night and day for the past three years. The New York plant will take care of the company's eastern business in this line, and will relieve the Milwaukee plant, which is overtaxed in supplying the great demand for molded insulation parts. F. J. Boller, formerly of the Milwaukee insulation department, is in charge of the new plant.

The Packard Electric Company of Warren, Ohio, have issued a Bulletin on "Metering Transformers" in which are described the weatherproof and switchboard type of the single, two and three phase potential and current transformers. The weatherproof, or outdoor type of oil-insulated transformer has been developed in compliance with the insistent demand from the central manager who is anxious to avoid the building of a housing to protect the transformer from the weather.

A plan to help its employees acquire a systematic savings habit has just been announced by the Western Electric Company. It will enable the personnel of the big electrical concern to lay aside each week or month a definite amount which they may wish to accumulate for investment or for any other purpose.